

# **EXHIBIT 12**

**EXHIBIT 12**

**Applications of U.S. Patent No. 8,943,500 to V-Migrate and V-Maestro (collectively, “Accused Products”)**

Plaintiff VirtaMove Corp. (“VirtaMove”) infringes claims 1–20 of the ’500 Patent (the “Asserted Claims”) under 35 U.S.C. § 271(a), (b), and (c). As set forth below, VirtaMove’s infringement is both direct and indirect.<sup>1</sup>

VirtaMove has directly infringed the ’500 Patent at least by making, using, offering to sell, selling, and/or importing into the United States its V-Migrate and V-Maestro (collectively, “Accused Products”) on or after the issuance date of the Patent.

VirtaMove induces infringement under 35 U.S.C. § 271(b) by providing the Accused Products, which are sold and specifically configured to infringe the Asserted Claims, to VirtaMove customers and partners in the United States. VirtaMove actively instructs and encourages its customers and partners on how to use the Accused Products, including through product manuals, advertising, and instructional videos. When used as instructed, VirtaMove’s customers and partners use these products to practice the systems of the ’500 Patent and directly infringe the Asserted Claims. On information and belief, VirtaMove specifically intends that its actions will result in infringement of the asserted claims of the ’500 Patent or subjectively believes that its actions will result in infringement of the Asserted Claims, but took deliberate actions to avoid learning of the facts.

As shown below, VirtaMove also contributes to infringement under 35 U.S.C. § 271(c) by providing the Accused Products, which embodies a material part of the claimed invention of the ’500 Patent, is known by VirtaMove to be specially made or adapted for use in an infringing manner, and is not with substantial non-infringing uses.

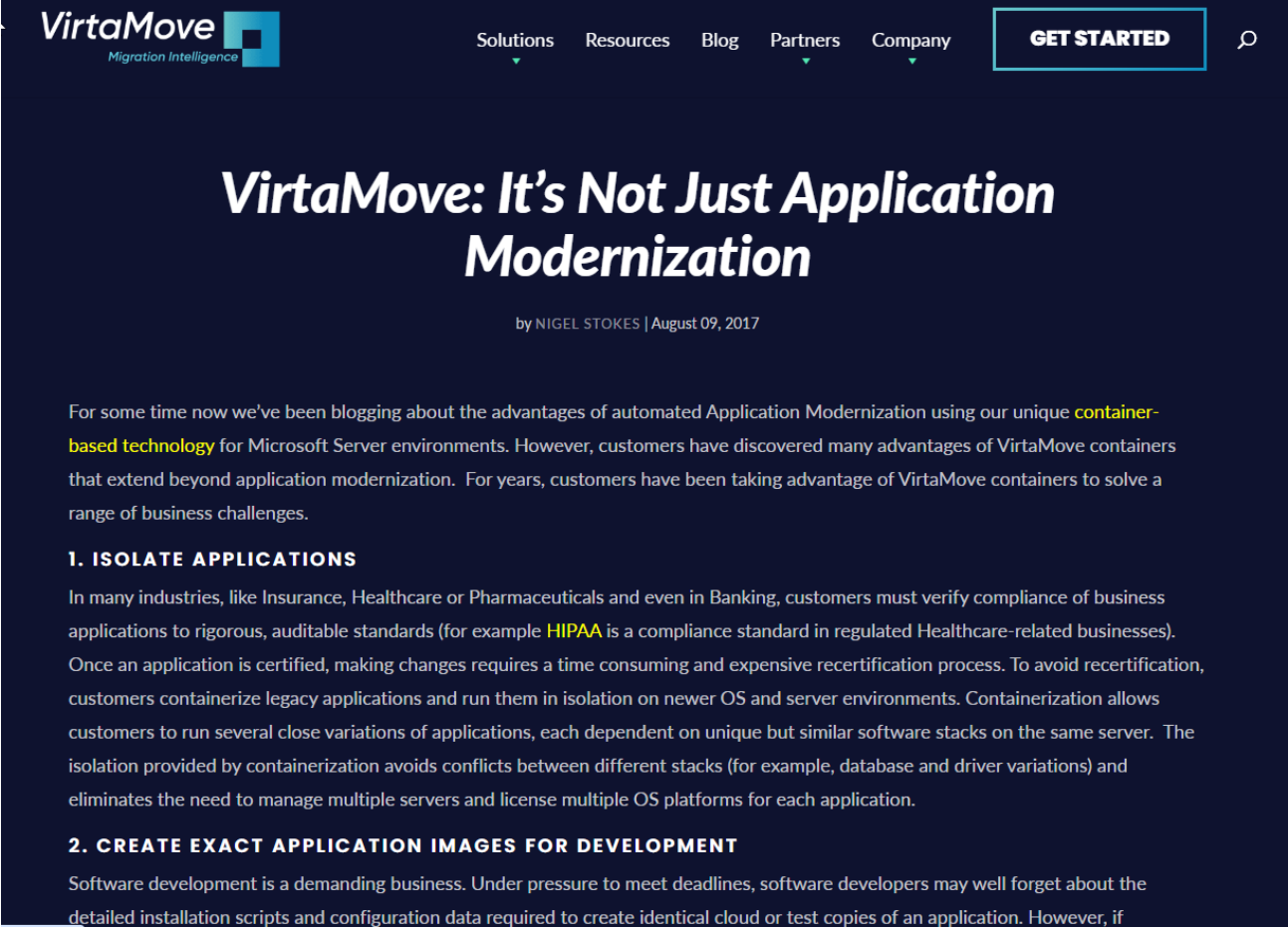
The Accused Products are specially designed to infringe the ’500 Patent and the accused components have no substantial non-infringing uses.

| <b>Claim</b> | <b>US 8,943,500<br/>Claim Term</b> | <b>Analysis</b>  |
|--------------|------------------------------------|--|
| 1pre         | A system, comprising:              | To the extent that the preamble is limiting, the Accused Products comprise “[a] system” for updating isolated environments (containers) as applications request new resources. |

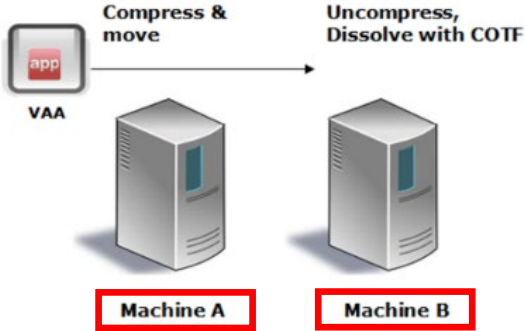
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<sup>1</sup> Public information is limited regarding the Accused Products, and accordingly, IBM reserves the right to amend its infringement contentions based on productions and source code made available during discovery.

| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p>For example, V-Migrate automates migration and “move[s] the application via smart, encrypted communication to a virtual container on the target system. The container encapsulates the virtualized application and its dependencies and separates it from the underlying OS.”</p> <div data-bbox="611 347 1906 1226"> <h2 data-bbox="682 370 1858 435"><i>Using VirtaMove to gain Migration Intelligence</i></h2> <p data-bbox="1146 461 1394 480">by VALERIE YATES   May 01, 2018</p> <p data-bbox="659 553 1843 613">Migration Intelligence is key to solving the problem of moving workloads in scale. What do we mean by Migration Intelligence? At the simplest level, MI means: <i>Be smart about what you move and how you move it.</i></p> <p data-bbox="659 649 1877 781">The first step in MI is to use smart, automated application discovery and monitoring on servers to dynamically discover application usage, server and workload capacity requirements, application dependencies, and migration readiness. Intelligent monitoring tells you which applications are still used, establishes the priorities for migration, reveals application and storage clutter, and helps you plan and size target server requirements.</p> <p data-bbox="659 816 1837 876">Once an application is “green-lighted” for migration (all application dependencies are discovered), you can move on to the automated migration step using <b>V-Migrate</b>.</p> <p data-bbox="659 912 1877 1044">So, what do we mean by automated migration? We mean move the application via smart, encrypted communication to a virtual container on the target system. The container encapsulates the virtualized application and its dependencies and separates it from the underlying OS. The container gives you a secure environment on the target server to do final acceptance testing and cut-over from the production server.</p> <p data-bbox="659 1079 1377 1101"><b>Read the Blog: The Next Step in Moving Legacy Workloads to the Cloud in Scale”</b></p> <p data-bbox="659 1182 785 1203"><b>Submitted by</b></p> </div> <p data-bbox="611 1263 1344 1295"><a href="https://virtamove.com/blog/gain-migration-intelligence/">(https://virtamove.com/blog/gain-migration-intelligence/)</a></p> <p data-bbox="611 1331 1900 1362">Additional evidence showing VirtaMove’s infringement is found in at least the following documents:</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            |  <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> |

| Claim | US 8,943,500<br>Claim Term                | Analysis   |
|-------|---|--|
|       |   | <div data-bbox="611 224 1906 764"> <h2 style="text-align: center;">Legacy Windows Application Migration Workflow</h2> <p style="text-align: center;">Capture. Flow. Transform. Apply</p> </div> <p>(<a href="https://www.youtube.com/watch?v=hDb541Ax6xw">https://www.youtube.com/watch?v=hDb541Ax6xw</a>)</p>   |
| 1a    | one or more central processing units; and | <p>The Accused Products comprise “one or more central processing units.”</p> <p>For example, the Accused Products migrate applications “from the source machine to the destination machine[,],” where the source and destination machines comprise “central processing units” (“CPUs”).</p> <div data-bbox="611 1040 1906 1393"> <h3 style="text-align: center;">Step 2: Move the Container</h3> <p>You must compress a container (.cap) to <u>move it from the source machine to the destination machine.</u> Then, you must uncompress the .cap file on the destination machine to begin using the container. One of the reasons for compressing the container is to preserve the short file names of the files in the container as they exist on the source machine.</p> <p>See <a href="#">Moving Containers</a>.</p> </div> |


| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <p data-bbox="611 215 1976 280"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers#Step-2:-Move-the-Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers#Step-2:-Move-the-Container</a></p> <p data-bbox="632 318 846 342">Dissolve Example 2</p>  <p data-bbox="611 764 1719 797"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve</a></p> |


| Claim                               | US 8,943,500<br>Claim Term  | Analysis  |      |             |                         |   |      |             |                                     |   |
|-------------------------------------|---|---|------|-------------|-------------------------|---|------|-------------|-------------------------------------|---|
|                                     |   | <p>The following table lists the elements in the <u>Source</u> Details window.</p> <table><tr><th>Item</th><th>Description</th></tr><tr><td>System Information card</td><td>Displays information about the system of the source:<ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Destination. You can assign a destination by clicking Assign.</li><li>• Memory</li></ul></td></tr></table> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671475/Viewing+Source+Details">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671475/Viewing+Source+Details</a>)</p> <p>The following table lists the elements in the <u>Destination</u> Details window.</p> <table><tr><th>Item</th><th>Description</th></tr><tr><td>Destination System Information card</td><td>Displays information about the system of the destination:<ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul></td></tr></table> | Item | Description | System Information card | Displays information about the system of the source: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Destination. You can assign a destination by clicking Assign.</li><li>• Memory</li></ul> | Item | Description | Destination System Information card | Displays information about the system of the destination: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul> |
| Item                                | Description   |   |      |             |                         |   |      |             |                                     |   |
| System Information card             | Displays information about the system of the source: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Destination. You can assign a destination by clicking Assign.</li><li>• Memory</li></ul>             |   |      |             |                         |   |      |             |                                     |   |
| Item                                | Description   |   |      |             |                         |   |      |             |                                     |   |
| Destination System Information card | Displays information about the system of the destination: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• <u>CPU</u></li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul> |   |      |             |                         |   |      |             |                                     |   |

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|-------|---|---|
|       |   | ( <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314868022/Viewing+Destination+Details">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314868022/Viewing+Destination+Details</a> ) |
| 1b    | one or more isolated environments including one or more applications and executables; | <p>The Accused Products comprise “one or more isolated environments including one or more applications and executables.”</p> <p>For example, the Accused Products “isolate applications.”</p>               |



| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <div data-bbox="819 245 1703 370"> <h2>VirtaMove: It's Not Just Application Modernization</h2> </div> <div data-bbox="1121 402 1390 423"> <p>by NIGEL STOKES   August 09, 2017</p> </div> <div data-bbox="659 492 1833 623"> <p>For some time now we've been blogging about the advantages of automated Application Modernization using our unique <b>container-based technology</b> for Microsoft Server environments. However, customers have discovered many advantages of VirtaMove containers that extend beyond application modernization. For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges.</p> </div> <div data-bbox="659 644 972 669"> <h3>1. ISOLATE APPLICATIONS</h3> </div> <div data-bbox="659 683 1862 920"> <p>In many industries, like Insurance, Healthcare or Pharmaceuticals and even in Banking, customers must verify compliance of business applications to rigorous, auditable standards (for example <b>HIPAA</b> is a compliance standard in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy applications and run them in isolation on newer OS and server environments. Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by containerization avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application.</p> </div> <div data-bbox="659 943 1367 967"> <h3>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3> </div> <div data-bbox="659 980 1856 1146"> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> </div> <div data-bbox="659 1179 1860 1274"> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> </div> <div data-bbox="600 1310 1344 1346"> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> </div> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <p>Indeed, the Accused Products “create a migration container and populate it with the application and its dependencies.”</p> <h2 data-bbox="657 329 1344 386">Step 2: Prepopulate a Container</h2> <div data-bbox="657 431 1140 492"> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</div> <p data-bbox="657 542 1713 672">Once the pre-migration Audit is complete, you can <u>create a migration container and populate it with the application and its dependencies</u>. V-Maestro will copy all dependencies into the container, such as user and group accounts and COM objects.</p> <p data-bbox="657 690 1671 773">Once this step is complete, V-Maestro will dock the container, which registers the container onto the operating system of the destination.</p> <p data-bbox="611 824 1948 862"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container</a>)</u></p> <p data-bbox="611 894 1969 963">Further evidence demonstrating that VirtaMove’s containers comprise applications and executables can be found below:</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p data-bbox="625 215 1182 256"><b>The Application Migration Process</b></p> <p data-bbox="625 293 993 337">  Owned by Thomas Farley (Deactivated) ***<br/> Last updated: Mar 25, 2022 • 2 min read </p> <p data-bbox="625 375 1125 399">Migrating an application involves the following steps:</p> <ol data-bbox="636 423 1934 841" style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link .</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a> .</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a> . You may wish to keep the application running in the migration container, as required.</li> </ol> <p data-bbox="611 922 1980 992"> <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a><br/> ) </p> |

## Adding Components to a Monitored Application

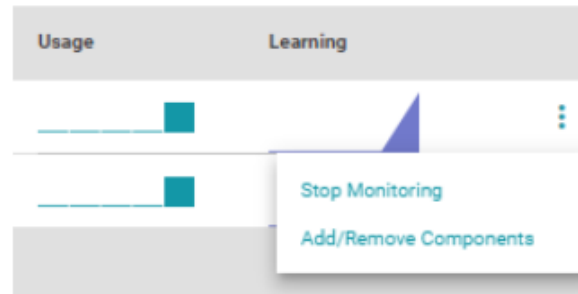


Owned by Thomas Farley (Deactivated) \*\*\*  
Mar 29, 2022 • 1 min read

You can add a component to an application on a source machine if a required dependency is missing.

### To Add a Component to a Monitored Application

1. Click **Manage>Sources**. The Source Inventory windows displays.
2. Select an active source. The Source Details window displays.
3. Click the **Monitoring** icon in the Source Details window. The **Monitoring** view of the Source Details window displays a list of monitored applications for the selected source.
4. Select an application in the list and click More Actions, **Add/Remove Components**. The Add/Remove Components window opens.



5. Enter the path of the component in the **Application Path** field.


#### Add/Remove Components

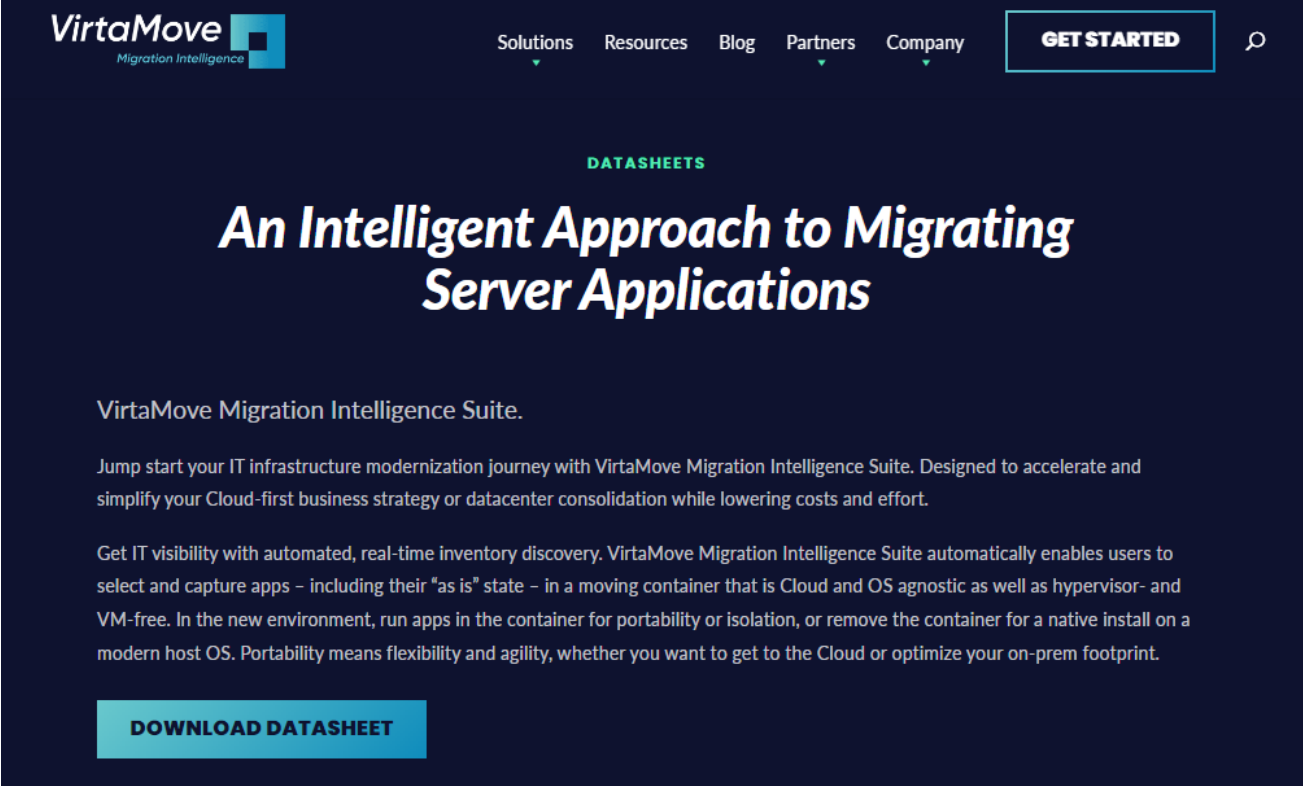
Application Path

Add

C:\Program Files\Apache Software Foundation\Apache2.2\bin\ab.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\abs.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\ApacheMonitor.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\htcacheclean.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\htdbm.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\htdigest.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\htpasswd.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\httpd.exe  
C:\Program Files\Apache Software Foundation\Apache2.2\bin\httpd2dbm.exe



| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p data-bbox="615 232 1381 272"><b>About Running and Exercising Your Application</b></p> <div data-bbox="615 310 982 354">  Owned by Thomas Farley (Deactivated) ***<br/>Mar 03, 2022 • 1 min read         </div> <p data-bbox="615 391 1927 451">Tether copies Windows Start menu items from the source machine to the underlying operating system of the destination machine. The Start menu location of a container on the destination machine is as follows:</p> <div data-bbox="615 475 1959 527"> <pre data-bbox="615 475 1228 511">1 Start&gt;All programs&gt;VirtaMove Container &lt;Container Name&gt;</pre> </div> <p data-bbox="615 548 1942 613">You can use the Windows <b>Start</b> menu to find your application on the destination machine. The application name is the same name as the one on the source machine, except that it displays the VirtaMove icon.</p> <p data-bbox="615 638 1942 667">When you undock a container, its Start Menu item is removed; when you dock the container again, its Start Menu item is available once again.</p> <p data-bbox="615 691 1942 756">Applications are tethered when they are exercised via the Start Menu. Note that the presence of the Start Menu items is not an indication that the applications have been migrated.</p> <p data-bbox="615 781 1900 846">Alternatively, you can use a command prompt to run your container application on the destination machine or to run several executables associated with an application.</p> <p data-bbox="615 886 1984 959"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427374/About+Running+and+Exercising+Your+Application">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427374/About+Running+and+Exercising+Your+Application</a>)</u></p> <p data-bbox="615 992 1900 1027">Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            |  <p>(<a href="https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/">https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |



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|-------|----------------------------|--|
|       |                            | <div data-bbox="611 207 1906 1234"> <h2><b><i>Protect your applications by modernizing</i></b></h2> <p>All the monitoring in the world doesn't eliminate the work involved in upgrading application stacks to new operating systems and software versions to improve security and reduce exposure to cyber warfare.</p> <p>Several options are available when it comes to upgrading:</p> <ol style="list-style-type: none"> <li><b>1. REDEVELOP AN APP</b> <ul style="list-style-type: none"> <li>You can incur the cost of redeveloping an application on a new OS. However, custom remediation costs can be substantial (more than six figures) and take months of effort and disruption.</li> </ul> </li> <li><b>2. CHOOSE AN ISV UPGRADE PATH</b> <ul style="list-style-type: none"> <li>If an ISV is involved, you might choose their upgrade path, along with the licensing and migration costs and delays for that single component of the software stack.</li> </ul> </li> <li><b>3. UPGRADE A SOFTWARE STACK BY HAND</b> <ul style="list-style-type: none"> <li>You might choose to upgrade a software stack by hand. This involves knowing what you still need, installing new versions of all the software components on the new server infrastructure, developing a data and application migration plan for each component, and developing a test plan to verify the migration. You will then need to remediate and rework any failed components. These steps can take weeks of planning, execution, and verification.</li> </ul> </li> <li><b>4. USE AN AUTOMATED MIGRATION TOOL</b> <ul style="list-style-type: none"> <li>This option involves using an automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required). Intelligent automation then places the software stack in the right place on the new OS.</li> </ul> <p>Automated migration can take just a few hours and not uncommonly saves many weeks of labour.</p> </li></ol></div> <p>(<a href="https://virtamove.com/blog/cyber-warfare-again/">https://virtamove.com/blog/cyber-warfare-again/</a>)</p> |

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|       |  | <p><i>The VirtaMove solution: Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</i></p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p>   |
| 1c    | wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other; | <p>The Accused Products comprise a system “wherein the one or more central processing units and the one or more isolated environments are configured to interact with each other.”</p> <p>For example, using VirtaMove’s automated migration tool “involves using an <i>automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required)</i>. Intelligent automation then places the software stack in the right place on the new OS.”<sup>2</sup> This migration tool inherently establishes a systematic and configured interaction between the central processing units and newly created isolated environments by isolating application dependencies, transferring them to a new infrastructure, and intelligently integrating the software stack within the new operating system, thereby necessitating and facilitating communication and operational synchronization between the CPUs and the applications within their isolated environments.</p> |

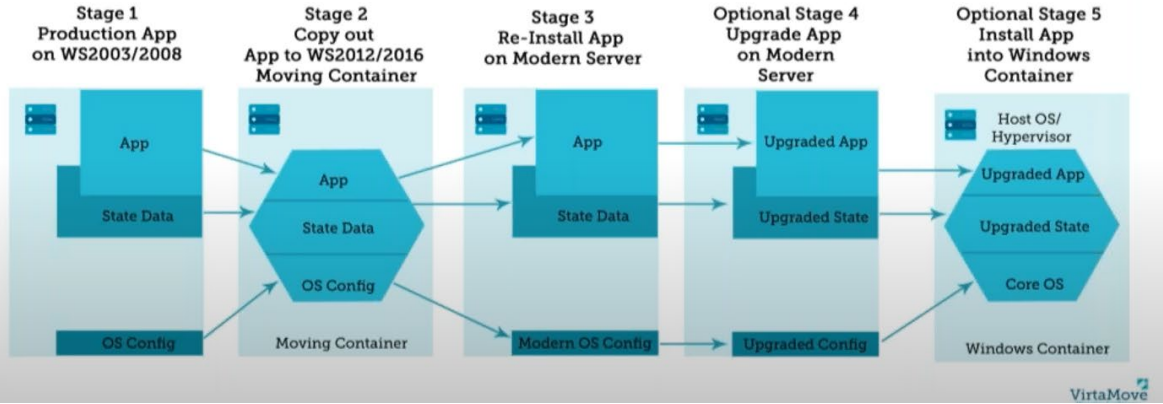
<sup>2</sup> All emphasis added unless otherwise noted.


| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <div data-bbox="611 207 1906 1234"> <h2 style="margin: 0;">Protect your applications by modernizing</h2> <p style="margin: 10px 0;">All the monitoring in the world doesn't eliminate the work involved in upgrading application stacks to new operating systems and software versions to improve security and reduce exposure to cyber warfare.</p> <p style="margin: 10px 0;">Several options are available when it comes to upgrading:</p> <ol style="list-style-type: none"> <li style="margin-bottom: 10px;"> <b>1. REDEVELOP AN APP</b> <ul style="list-style-type: none"> <li>❑ You can incur the cost of redeveloping an application on a new OS. However, custom remediation costs can be substantial (more than six figures) and take months of effort and disruption.</li> </ul> </li> <li style="margin-bottom: 10px;"> <b>2. CHOOSE AN ISV UPGRADE PATH</b> <ul style="list-style-type: none"> <li>❑ If an ISV is involved, you might choose their upgrade path, along with the licensing and migration costs and delays for that single component of the software stack.</li> </ul> </li> <li style="margin-bottom: 10px;"> <b>3. UPGRADE A SOFTWARE STACK BY HAND</b> <ul style="list-style-type: none"> <li>❑ You might choose to upgrade a software stack by hand. This involves knowing what you still need, installing new versions of all the software components on the new server infrastructure, developing a data and application migration plan for each component, and developing a test plan to verify the migration. You will then need to remediate and rework any failed components. These steps can take weeks of planning, execution, and verification.</li> </ul> </li> <li> <b>4. USE AN AUTOMATED MIGRATION TOOL</b> <ul style="list-style-type: none"> <li>❑ This option involves using an automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required). Intelligent automation then places the software stack in the right place on the new OS.</li> </ul> </li> </ol> <p style="margin-top: 20px;">Automated migration can take just a few hours and not uncommonly saves many weeks of labour.</p> </div> <p style="margin-top: 20px;">(<a href="https://virtamove.com/blog/cyber-warfare-again/">https://virtamove.com/blog/cyber-warfare-again/</a>)</p> <p style="margin-top: 20px;">Moreover, after isolating legacy apps and dependencies from the underlying OS and moving apps to a new environment, VirtaMove's Migration Intelligence allows users to “perform a <i>vulnerability analysis and remediate or enhance the apps</i> as needed.” This process not only transfers the applications into newly-</p> |

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|       |                            | <p>created, isolated operational spaces but also involves subsequent steps that necessitate further CPU-environment interaction, particularly during the vulnerability analysis and remediation phases. These steps require the CPUs to process and execute tasks specific to the isolated environments, ensuring their security and functionality within the new system.</p> <div><h2><i>How VirtaMove can help</i></h2><p>Use VirtaMove's automated migration tool to isolate legacy apps and dependencies from the underlying OS. Then, move your legacy apps to a new server and OS (upgrading web server and database components on the fly as required). After the move, you can perform a vulnerability analysis and remediate or enhance the apps as needed.</p><p>Our customers report to us that it's important for them to modernize legacy applications and move them so that they can run on modern, secure servers. Commonly, they report quarterly progress and status of these efforts to the organization's CIO or CTO, and all the way to the Board of Directors.</p><p>Close the door on malware and ransomware. If you need help to upgrade your legacy applications, don't hesitate to give us a call. We modernize apps and move them to new, secure Windows Server and Linux operating systems every day. We'd be pleased to share what we know.</p></div> <p>(<a href="https://virtamove.com/blog/source-code-leaks-are-bad-for-business/">https://virtamove.com/blog/source-code-leaks-are-bad-for-business/</a>)</p> |

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|       |                            | <p><b>Migration Intelligence can help</b></p> <p>Use an automated migration tool to isolate legacy apps and dependencies from the underlying OS. Then, move your legacy apps to a new server and OS (upgrading web server and database components on the fly as required). After the move, you can perform a vulnerability analysis and remediate or enhance the apps as needed.</p> <p>You don't need install scripts or source code for your legacy apps. Automated migration takes care of the move and saves months of effort usually needed to upgrade apps.</p> <p><b>Move beyond the security breach hype-cycle</b></p> <p>Cyber threat detection on modern systems offers few advantages. It's time to close the barn door on legacy systems and move apps to newer, secure servers.</p> <p>When breaches happen, organizations that have historically done nothing about fixing known exposures of legacy systems may face serious legal claims from customers, shareholders, and governments. People are demanding that companies be held responsible for securing the large database of personal data they collect and maintain.</p> <p>If you're tired of the security breach hype-cycle and need help upgrading your Microsoft Server applications, don't hesitate to give us a call. We modernize apps and move them to new, secure Windows operating systems every day. We'd be pleased to share what we know.</p> <p><a href="https://virtamove.com/blog/security-breach-hype-cycle/">(https://virtamove.com/blog/security-breach-hype-cycle/)</a></p> <p>VirtaMove's "[c]ontainerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server," indicating interaction between the central processing unit and the isolated environments.</p> |

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|       |                            | <div><h2>Using VirtaMove to Solve Datacenter Management Problems</h2><p>by VALERIE YATES   May 01, 2018</p><p>For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges in the datacenter management sphere.</p><h3>1. ISOLATE APPLICATIONS</h3><p>In industries like Insurance, Healthcare, Pharma, and Banking, customers must verify compliance to rigorous, auditable standards. Once an app is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy apps and run them in isolation on new OS and servers. Containerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server.</p><h3>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3><p>If apps are <b>containerized</b>, it's easy to create exact images on new OSs such as Windows Server WS2012, WS2016, or WS2019. This eliminates the need to worry about recreating an installation process. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and cloud servers.</p><h3>3. STORE MASTER COPIES OF APPLICATIONS FOR DISTRIBUTION</h3><p>Once apps are containerized using VirtaMove, backup copies of the containerized apps can be stored for recovery, packaging, or distribution purposes. The master copy of an app stored in a container can be used to create a fresh, decluttered installation of an app, free of malware or other exposures.</p><p>(<a href="https://virtamove.com/blog/solve-datacenter-management-problems/">https://virtamove.com/blog/solve-datacenter-management-problems/</a>)</p><p>To further illustrate the interaction between CPUs and isolated environments (i.e., containers):</p></div> |


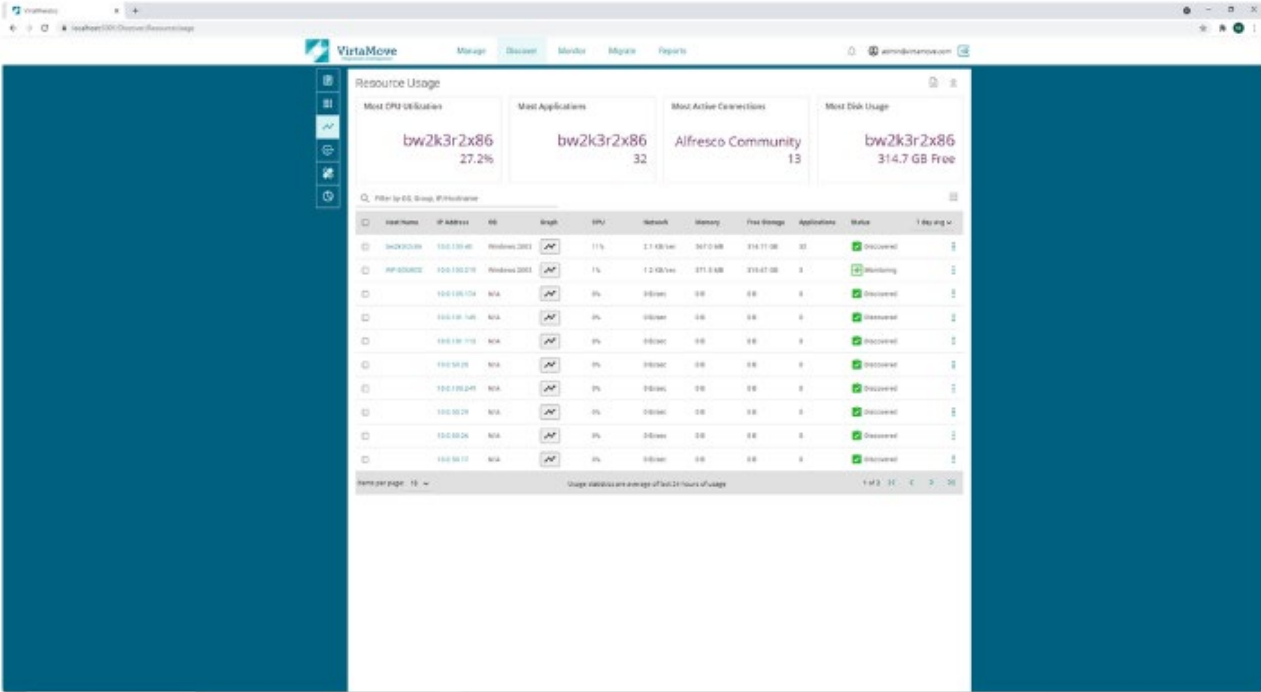
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|       |                            | <p data-bbox="646 240 1150 277">5 Stages of the Migration Journey</p> <p data-bbox="953 363 1482 394">Five Stages of the Migration Journey</p>  <p data-bbox="611 898 1413 930"><a href="https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s">https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s</a></p> |

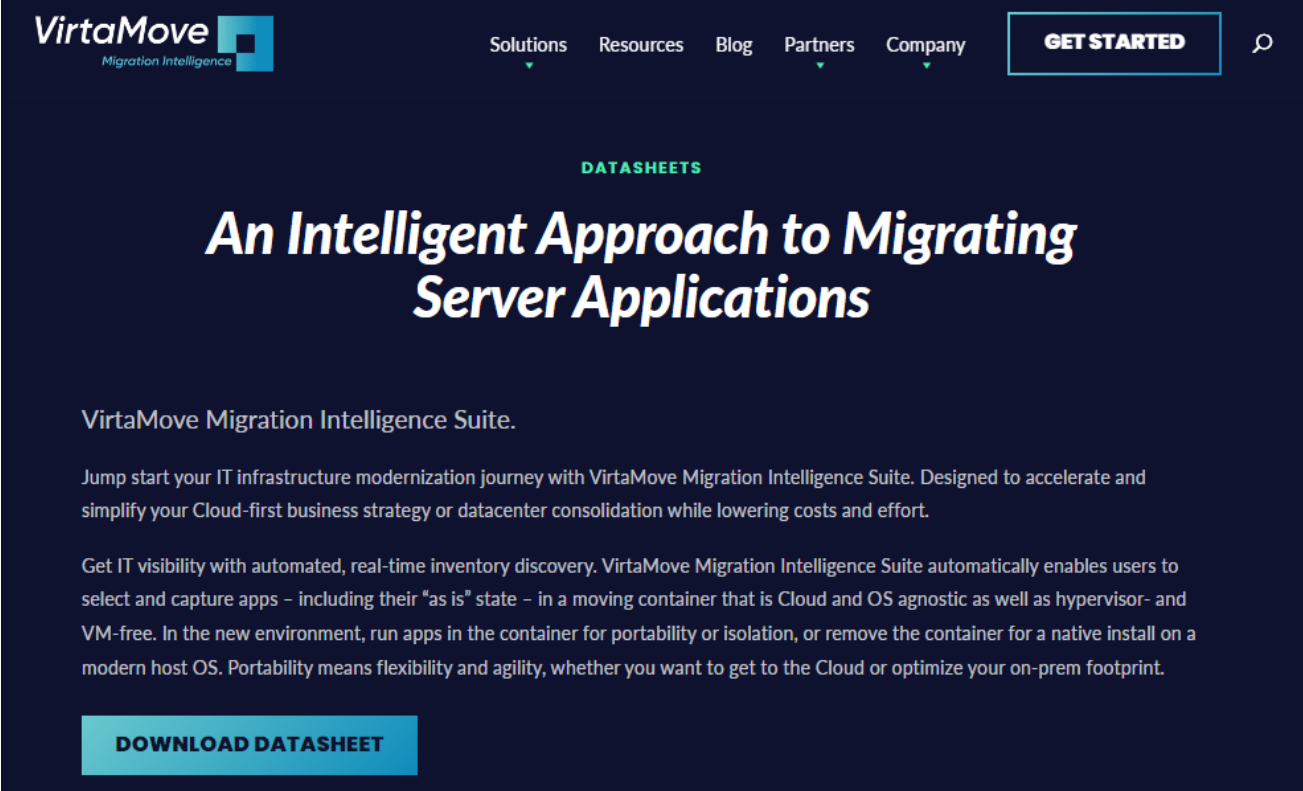
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|       |                            | <div data-bbox="606 224 1797 719"> <h3 style="text-align: center;">Legacy Windows Application Migration Workflow</h3> <p style="text-align: center;"><b>Capture. Flow. Transform. Apply</b></p> </div> <p>(<a href="https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s">https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s</a>)</p> <h3>About Migrating Applications</h3> <div data-bbox="646 932 1079 987"> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read</p> </div> <p><u>VirtaMove Application Migration is an intelligent discovery tool that migrates an application and its dependencies from a tethered source machine to a destination machine. VirtaMove extracts existing enterprise applications and packages them into a container that can be provisioned and run natively on any operating system, machine, or cloud.</u></p> <p>To migrate an application, VirtaMove is not required on the source machine. <u>VirtaMove is required on the destination machine</u> to tether to the application on the source machine and <u>run the migrated virtual application appliance on the destination machine.</u></p> |




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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310444457/About+Migrating+Applications?search_id=dec12687-24bb-428b-a12e-2ef9e928c184">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310444457/About+Migrating+Applications?search_id=dec12687-24bb-428b-a12e-2ef9e928c184</a>)</p> <p>Migrating an application involves the following steps:</p> <ol style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link .</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files <u>selected from the source machine.</u></li> <li>5. <u>Run your virtualized application on the destination machine</u> and exercise the application. See <a href="#">Ru</a> <a href="#">nning and Exercising Your Application</a> .</li> <li>6. Run VirtaMove Dissolve if you want to <u>remove the migration container from the application and transfer the application to the underlying operating system on the destination machine</u> so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Diss</a> <a href="#">olving a Virtual Container</a> . You may wish to keep the <u>application running in the migration container,</u> as required.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</p> <h2>Docking</h2> <p><u>Docking a container integrates and prepares the container's environment as part of the underlying operating system so that the application is ready to run.</u></p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers</a>)</p> |

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|       |                            | <p>Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> <div data-bbox="611 276 1906 1167">A screenshot of a VirtaMove blog post. The header features the VirtaMove logo (a blue square with a white 'V' and the text 'VirtaMove Migration Intelligence') on the left, and navigation links for 'Solutions', 'Resources', 'Blog', 'Partners', and 'Company' on the right, each with a small downward arrow. A 'GET STARTED' button is in the top right corner. The main heading is 'Using VirtaMove to gain Migration Intelligence' in a large, bold, white font. Below the heading is the author information 'by VALERIE YATES   May 01, 2018'. The body text is in a smaller white font and discusses Migration Intelligence as a key to solving workload migration problems. It mentions 'V-Migrate' in yellow text. The post concludes with a link to 'Read the Blog: The Next Step in Moving Legacy Workloads to the Cloud in Scale' in yellow text.<p>VirtaMove<br/>Migration Intelligence</p><p>Solutions Resources Blog Partners Company GET STARTED</p><h2>Using VirtaMove to gain Migration Intelligence</h2><p>by VALERIE YATES   May 01, 2018</p><p>Migration Intelligence is key to solving the problem of moving workloads in scale. What do we mean by Migration Intelligence? At the simplest level, MI means: <i>Be smart about what you move and how you move it.</i></p><p>The first step in MI is to use smart, automated application discovery and monitoring on servers to dynamically discover application usage, server and workload capacity requirements, application dependencies, and migration readiness. Intelligent monitoring tells you which applications are still used, establishes the priorities for migration, reveals application and storage clutter, and helps you plan and size target server requirements.</p><p>Once an application is "green-lighted" for migration (all application dependencies are discovered), you can move on to the automated migration step using <b>V-Migrate</b>.</p><p>So, what do we mean by automated migration? We mean move the application via smart, encrypted communication to a virtual container on the target system. The container encapsulates the virtualized application and its dependencies and separates it from the underlying OS. The container gives you a secure environment on the target server to do final acceptance testing and cut-over from the production server.</p><p><b>Read the Blog: The Next Step in Moving Legacy Workloads to the Cloud in Scale"</b></p></div> |

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|       |                            | <p>(<a href="https://virtamove.com/blog/gain-migration-intelligence/">https://virtamove.com/blog/gain-migration-intelligence/</a>)</p> <h2 data-bbox="632 266 1241 318">Discovering Resource Usage</h2> <p data-bbox="632 370 1115 428">  Owned by Thomas Farley (Deactivated) ***<br/>             Last updated: Mar 30, 2022 • 2 min read         </p> <p data-bbox="632 477 1824 509">The Resource Usage window displays a summary of resource usage data for discovered sources.</p> <p data-bbox="632 548 1535 581">Click <b>Discover&gt;Resource Usage</b>. The Resource Usage page is displayed.</p>  |

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|       |  | (https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314605794/Discovering+Resource+Usage)   |
| 1d    | wherein the one or more isolated environments are created during installation of the one or more applications, and | <p>The Accused Products comprise a system “wherein the one or more isolated environments are created during installation of the one or more applications.”</p> <p>For example, “[i]n the new environment, run apps in the container for portability or isolation,” implying that the isolation is created during installation of the applications.</p>  <p>(https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/)</p> |

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|       |                            | Indeed, installation of applications requires “[c]reat[ing] a virtual container” and “pre-populat[ing] the virtual container with applications,” where such containers are isolated environments, as already indicated. |

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|       |                            | <h2 data-bbox="653 237 1413 289">The Application Migration Process</h2> <div data-bbox="653 342 1150 406"> Owned by Thomas Farley (Deactivated) ...<br/>Last updated: Mar 25, 2022 • 2 min read</div> <p data-bbox="653 459 1335 492">Migrating an application involves the following steps:</p> <ol data-bbox="653 529 1787 1304" style="list-style-type: none"><li data-bbox="653 529 1787 662">1. Meet requirements for your environment as well as source and destination machines.<br/>See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">✖ https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link .</li><li data-bbox="653 686 1724 768">2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li><li data-bbox="653 792 1507 824">3. <u>Create a virtual container and connect it to the source machine.</u></li><li data-bbox="653 849 1776 930">4. <u>Pre-populate the virtual container with applications,</u> services, accounts, components, and files selected from the source machine.</li><li data-bbox="653 954 1472 1044">5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">📖 Running and Exercising Your Application</a> .</li><li data-bbox="653 1068 1780 1304">6. Run VirtaMove Dissolve if you want to <u>remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed.</u> Note that this process cannot be reversed. See <a href="#">📖 Dissolving a Virtual Container</a> . You may wish to keep the application running in the migration container, as required.</li></ol> |

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</p> <p>Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> |

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|       |                            | <div data-bbox="819 233 1709 358"> <h2>VirtaMove: It's Not Just Application Modernization</h2> </div> <div data-bbox="1125 391 1392 412"> <p>by NIGEL STOKES   August 09, 2017</p> </div> <div data-bbox="657 480 1841 613"> <p>For some time now we've been blogging about the advantages of automated Application Modernization using our unique <b>container-based technology</b> for Microsoft Server environments. However, customers have discovered many advantages of VirtaMove containers that extend beyond application modernization. For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges.</p> </div> <div data-bbox="657 636 972 660"> <h3>1. ISOLATE APPLICATIONS</h3> </div> <div data-bbox="657 675 1871 914"> <p>In many industries, like Insurance, Healthcare or Pharmaceuticals and even in Banking, customers must verify compliance of business applications to rigorous, auditable standards (for example <b>HIPAA</b> is a compliance standard in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy applications and run them in isolation on newer OS and server environments. Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by containerization avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application.</p> </div> <div data-bbox="657 937 1371 963"> <h3>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3> </div> <div data-bbox="657 976 1866 1143"> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> </div> <div data-bbox="657 1175 1871 1271"> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> </div> <div data-bbox="602 1310 1344 1346"> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> </div> |






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|       |  | <p>There are advantages to a stateful re-install on new servers with a modern operating system. Benefits include:</p> <ul style="list-style-type: none"> <li>❑ A re-install closes known security exposures on old W2K, WS2003, and WS2008 servers.</li> <li>❑ Your apps will run on a secure, supported OS.</li> <li>❑ New servers run faster and improve app performance.</li> <li>❑ You can reconfigure where apps run. Apps can be split and installed on separate servers or consolidated on a single server.</li> <li>❑ Once it's moved, you can easily do an in-place upgrade of the app to a new version without breaking configuration data.</li> <li>❑ Legacy apps can be remediated using the tools and techniques available on a modern platform.</li> </ul> <p>Squeeze more life out of your apps</p> <p>Moving apps that you rely on to new servers extends their useful life and eliminates the effort to redevelop or learn new systems. An automated, stateful re-install doesn't impact your existing applications and ensures good performance on new servers. It saves time and money. In one month, automation provides a ten times improvement in the number of applications that can be re-installed and cut-over into production on new servers. If you have the source code, you can plan future functional or security improvements using a conventional change management process.</p> <p>An automated, stateful re-install is the best first step. It starts your app migration journey safely and provides tangible improvements and benefits. Your apps will be in a better place, and your business along with them. VirtaMove can help you along your upgrade path. If you'd like to understand more about how we give business-critical production applications a second life by moving them to a better place, don't hesitate to give us a <b>call</b>. We're pleased to share what we know.</p> <p>(<a href="https://virtamove.com/blog/app-migration-journey/">https://virtamove.com/blog/app-migration-journey/</a>)</p> |
| 1e    | updates to the one or more isolated environments occur as the one or more applications use additional resources; | <p>The Accused Products comprise a system “[wherein] updates to the one or more isolated environments occur as the one or more applications use additional resources.”</p> <p>For example, VirtaMove supports complex synchronization functionality and allows users to “<i><b>select an ‘update’ sync to make sure that the latest files are in the VirtaMove container. The latency in the resync process depends on the amount of new data being copied into the container.</b></i>” You can view a Latency Report to understand available network bandwidth.”</p>   |

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|       |                            | <p>Here, VirtaMove’s <b>“update sync”</b> feature directly facilitates the dynamic and necessary adaptation of the isolated environments—represented by the VirtaMove containers—to accommodate new or updated application resources. The capability to sync and thus update the container contents based on the latest files reflects an intrinsic mechanism where the isolated environments evolve in response to the application’s changing resource demands. The inclusion of a Latency Report to monitor network bandwidth availability further supports this claim by ensuring that updates are not only timely but also informed by the current network conditions, optimizing the update process.</p> <div data-bbox="611 493 1908 1167"> <h3>Step 6: Cut-Over</h3> <p>Once the application is verified and passes User Acceptance testing, you can plan a cut-over into production. At a high level, cut-over might look like this: the VirtaMove CAP file is used to complete a native install of the migrated application on the modern operating system. In addition, resyncing of all dynamic data and application components is required. If a relational database is part of the migration, it too needs to be resynced. At cut-over, the Cloud app becomes the new production system, so a sequester, quiet point, or cut-over window is required. Network performance might be a challenge during the available cut-over window.</p> <p>Let’s talk about syncing the container on the Cloud. Some time has passed from initial containerization and completion of User Acceptance testing. How much time depends on how long it took to complete User Acceptance testing. To resynchronize, the latest version of data and files from the source Production environment is brought over to the Cloud. If there’s a long delay between initial containerization and User Acceptance testing, resynchronization may need to be completed in the local network domain before transferring the resynced CAP file to the Cloud environment. The CAP file is then used to natively re-install the application on the new server.</p> <p>VirtaMove software supports complex synchronization functionality. You can select an “update” sync to make sure that the latest files are in the VirtaMove container. The latency in the resync process depends on the amount of new data being copied into the container. You can view a Latency Report to understand available network bandwidth.</p> </div> <p>(<a href="https://virtamove.com/blog/cloud-onboarding-with-virtamove-7-steps-to-success/">https://virtamove.com/blog/cloud-onboarding-with-virtamove-7-steps-to-success/</a>)</p> <p>The “update sync” feature is also referred to as “tether sync.” “When you tether and then launch the application, <i>if the application tries to open a folder and the folder does not exist on the underlying operating system of the destination machine, tether will copy that folder into the container.</i>”</p> |

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|       |                            | <p><b>Note:</b></p> <p>When you tether and then launch the application, if the application tries to open a folder and the folder <u>does not exist on the underlying operating system of the destination machine, tether will copy that folder into the container.</u></p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427374/About+Running+and+Exercising+Your+Application">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427374/About+Running+and+Exercising+Your+Application</a>)</p> <p>VirtaMove application “tethering” or “staging and verifying” involves updating the container if the application needs additional resources.</p> <div data-bbox="606 667 1904 1230" data-label="Diagram"> <p>The diagram, titled "Legacy Windows Application Migration Workflow" with the subtitle "Capture. Flow. Transform. Apply", illustrates a four-step process:</p> <ol style="list-style-type: none"> <li><b>Old Server:</b> Represented by three server icons. An arrow points to the next step.</li> <li><b>Capture App As Is State:</b> A server icon with a blue circle labeled "app" and a green checkmark. A red "X" icon is above the arrow from the Old Server.</li> <li><b>Flow:</b> An arrow labeled "Flow" points to the next step.</li> <li><b>Staging Container on Moder Server:</b> A blue hexagon labeled "app" with a green checkmark. A red "X" icon is above the arrow from the previous step.</li> <li><b>Flow:</b> An arrow labeled "Flow" points to the next step.</li> <li><b>Verify State:</b> A blue hexagon labeled "app" with a green checkmark. A red "X" icon is above the arrow from the previous step.</li> <li><b>Flow:</b> An arrow labeled "Flow" points to the final step.</li> <li><b>Dissolve container, Apply App State to New Server, VM, Cloud or on Windows Docker Container:</b> A server icon with a blue circle labeled "app" and a green checkmark. A red "X" icon is above the arrow from the previous step.</li> </ol> <p>A VirtaMove logo is in the bottom right corner of the diagram.</p> </div> <p>(<a href="https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s">https://www.youtube.com/watch?v=lhVF9-wgd2M&amp;t=1639s</a>)</p> <p>Containers are updated with “registry keys and files” during “exercising” of the application.</p> |

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|       |                            | <p>The more you use the tethered application, the more VirtaMove learns about it. Exercise the application as much as possible before you disable Tether. <u>Many registry keys and files do not get pulled across unless certain parts of the application are exercised.</u> For example, right-click operations in SQL Management Studio will not work untethered if they were not exercised while tethered.</p> <p><b>Note:</b></p> <p>An application may run more slowly than you are used to when it is tethered. This is temporary; the application will run as usual on the destination machine once you have exercised the application and completed Tether.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394514/Exercising+Your+Application">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394514/Exercising+Your+Application</a>)</p> <p><b><u>Update Mode</u></b></p> <p>Using Update Mode, any files or keys that are newest will be copied. If you changed a file on both the source and destination machines, the newest file will be copied. Changes that have been made to the destination machine may not be preserved in Update Mode. You should therefore keep track of changes that were made to the destination for re-hosting or other reasons because these changes may need to be repeated.</p> <p>Example Use:</p> <p>An application has been tethered to a destination machine. Work has been performed on the destination machine, for example testing or re-configuration. Later, <u>when you want to finalize the migration, you re-tether to the original production machine to get any files that have been updated or added.</u> For example, a website installation to which changes have been made. In this case, you would use Update Mode to avoid losing modifications to the destination machine.</p> |


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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync</a>)</p> <p>“You can upgrade existing containers using the Administrative Console or the virtaupgrade CLI command.”</p> <p><u>Upgrading Containers</u></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read</p> <p><u>You can upgrade existing containers</u> using the Administrative Console or the  CLI command.</p> <p>Containers that require upgrading are indicated in Administrative Console by the label "Needs Upgrade".</p> <p>When you upgrade a container, a backup folder is created in the container folder. Test the upgraded container and then delete the backup folder when you are satisfied that the container is running correctly.</p> <p><b>To Upgrade a Container</b></p> <ol style="list-style-type: none"> <li>1. In the Administrative Console, select the container that requires upgrading.</li> <li>2. Select <b>Upgrade</b> in the toolbar. The status of the appliance changes to "Undocked". You can now select and dock the upgraded container.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers</a>)</p> <p>VirtaMove’s “Config-on-the-fly” feature updates configuration information of containers.</p> |

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|       |                            | <h2 data-bbox="638 224 1010 277">Config-on-the-Fly</h2> <div data-bbox="638 321 1104 381">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read         </div> <h3 data-bbox="638 428 863 456">Table of Contents</h3> <ul data-bbox="638 493 1255 667" style="list-style-type: none"> <li>• <a href="#">Config-on-the-fly Files and Paths</a></li> <li>• <a href="#">Config-on-the-fly on Demand</a></li> <li>• <a href="#">Mapping NICs between Source and Destination</a></li> <li>• <a href="#">COTF Log</a></li> </ul> <hr data-bbox="638 716 1881 721"/> <p data-bbox="638 781 1850 1000">Your container may contain configuration information from another system and this information may not be compatible with the current system. For example, you may need to change IP addresses or hostnames. You can use a Config-on-the-fly file (<i>StandardCOTF.xml</i>) to update the configuration information so that it works with the current system. You may need to update the settings in the configuration file with information from the current system.</p> <hr data-bbox="1205 1024 1367 1029"/> <p data-bbox="611 1065 1745 1097"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly</a></p> <p data-bbox="611 1130 1990 1312">VirtaMove’s <i>virtacreate</i> “command <b><i>creates or updates a container.</i></b>” The <i>virtacreate</i>’s functionality inherently ensures that the isolated environments—i.e., VirtaMove’s containers—can be dynamically updated in response to the evolving needs of the applications they house. By allowing both the creation and updating of containers, VirtaMove provides mechanism for the isolated environments to adapt over time, accommodating new or changed application resources.</p> |



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|       |  | <p>3 Up-level your apps</p> <p>VirtaMove doesn't copy outdated OSs to VMs. It up-levels apps to new OS versions. VM noise is reduced by moving apps from old OSs like WS2003 or WS2008 to a modern, greenfield OS like WS2012, WS2016, and WS2019. Uplifting apps to a new OS can be done with less than one-quarter of the bandwidth, storage, and processing needed for full VM cloning. Up-leveling <b>closes security holes</b>.</p> <p>4 Use advanced cloud tools</p> <p>A modern OS lets you use advanced datacenter and cloud tools to manage app usage and reduce VM noise levels. You avoid the cost of patching and maintaining old OSs. Better OS management and <b>fresh app installs</b> mean less noisy operations with:</p> <ul style="list-style-type: none"> <li>□ Optimized storage</li> <li>□ Improved performance</li> </ul> <p>(<a href="https://virtamove.com/blog/virtamove-as-a-devops-tool/">https://virtamove.com/blog/virtamove-as-a-devops-tool/</a>)</p> |
| 1f    | wherein the one or more isolated environments are removed as part of an uninstall of the one or more applications; | <p>The Accused Products comprise a system “wherein the one or more isolated environments are removed as part of an uninstall of the one or more applications.”</p> <p>VirtaMove offers the “dissolve” functionality, where isolated environments—i.e., VirtaMove’s containers—are copied to a system and then “dissolved.” By choosing to “dissolve” the container, the container is removed, and the contents of the container, which includes the application, are transferred to the underlying operating system of the destination machine.</p> <h3>Moving Containers</h3> <p><u>To move a container between two machines, you must <b>compress</b> the container into a .cap file. You move only .cap files between machines.</u></p> <p>If scripts are required for the tethering process, place the scripts in the container's <b>scripts</b> folder before you move a container.</p>  |



| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313884729/Moving+Compressing+and+Deleting+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313884729/Moving+Compressing+and+Deleting+Containers</a>)</p> <p>6. Run <u>VirtaMove Dissolve</u> if you want to <u>remove the migration container from the application and transfer the application</u> to the underlying operating system on the destination machine so that <u>the application will behave as if natively installed</u>. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</p> <h2>Dissolving a Container</h2> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</p> <p><u>After you have migrated an application and exercised it, you can choose to dissolve the migration container. This transfers the application to the underlying operating system of the destination machine so that the migrated application behaves as if it had been installed there. All dependencies on VirtaMove are removed.</u></p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394908/Dissolving+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394908/Dissolving+a+Container</a>)</p> |

## About Dissolve



Owned by Thomas Farley (Deactivated) \*\*\*

Last updated: Mar 28, 2022 • 4 min read

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Dissolve is a VirtaMove CLI utility that lets you remove VirtaMove encapsulation from the migration container and transfer the migrated application to the underlying operating system of the destination machine so that the application will behave as if natively installed.

There is no limit to the number of times that you can run the `virtadissolve` command on an appliance. If your VirtaMove license key does not include Dissolve, contact your VirtaMove Sales Representative to inquire about evaluating the Dissolve function.


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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve</a>)</p> <p>“Once user acceptance testing (UAT) of the application is complete, <i>the application can be removed from its container</i> and installed onto the destination operating system, <i>removing any dependency on VirtaMove software</i>. Now the application has been fully migrated onto the new destination server and the legacy Windows 2003 server can be <i>decommissioned</i>.”</p> <div data-bbox="613 456 1988 927"> <p><b>#5 – TEST. TEST AGAIN. AND TEST SOME MORE</b></p> <p>Thanks to all your preparations, the migration rubber hits the road. You're going zero to sixty in no time, and you feel the wind in your hair. Following VirtaMove's rigorous migration methodology, with Scott riding shotgun beside you, means success at this stage.</p> <p>Now's the time to thoroughly test the application while it's still tethered in its container. Use all of the components and features of the application to make sure that everything is working as expected and the application is viable on the destination server. There's no such thing as too much testing. For example, right-click operations in SQL Management Studio will not work untethered if they were not exercised while tethered.</p> <p>Once user acceptance testing (UAT) of the application is complete, the application can be removed from its container and installed onto the destination operating system, removing any dependency on VirtaMove software. Now the application has been fully migrated onto the new destination server and the legacy Windows 2003 server can be decommissioned.</p> </div> <p>(<a href="https://virtamove.com/blog/five-keys-to-a-successful-migration/">https://virtamove.com/blog/five-keys-to-a-successful-migration/</a>)</p> <p>VirtaMove also allows for moving application containers, backing up said containers, and/or deleting said containers after application migration to the destination machine. Container templates may also be generated and copied to storage.</p> |

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|       |                            | <p data-bbox="625 240 1056 293"><b>Moving Containers</b> </p> <p data-bbox="625 321 1848 397">To move a container between two machines, you must <u>compress</u> the container into a .cap file. You move only .cap files between machines.</p> <p data-bbox="625 435 1854 511">If scripts are required for the tethering process, place the scripts in the container's <code>scripts</code> folder before you move a container.</p> <p data-bbox="611 576 1980 646"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313884729/Moving%2C+Compressing%2C+and+Deleting+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313884729/Moving%2C+Compressing%2C+and+Deleting+Containers</a>)</u></p> |

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|       |                            | <h2 data-bbox="653 233 848 289">Docking</h2> <p data-bbox="653 321 1850 412"><u>Docking a container integrates and prepares the container's environment as part of the underlying operating system so that the application is ready to run.</u></p> <p data-bbox="653 456 1839 597">When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p data-bbox="653 641 1871 889">VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed when docking fails:</p> <div data-bbox="653 938 1598 976"><pre>Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre></div> <p data-bbox="611 1052 1982 1122">(https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers)</p> |


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|       |                            | <h3 data-bbox="638 237 1192 293">To Prepare for Dissolve</h3> <ol data-bbox="653 326 1848 899" style="list-style-type: none"><li data-bbox="653 326 1848 412">1. Uncompress the container if it is compressed: in the Administrative Console, select the container, and then click <b>Uncompress</b>.</li><li data-bbox="653 444 1848 583">2. If services are associated with the selected container and these services are running, click the <b>Services</b> tab, then right-click each service and select <b>Stop</b> to stop the services.</li><li data-bbox="653 615 879 647">3. Click <b>Undock</b>.</li><li data-bbox="653 680 968 712">4. Click the <b>Tether</b> tab.</li><li data-bbox="653 745 1644 777">5. Disable Tether if it is enabled: de-select the <b>Enable Tether</b> check box.</li><li data-bbox="653 810 835 842">6. Click <b>Save</b>.</li><li data-bbox="653 875 1841 899">7. At the prompt, click <b>Yes</b> or <b>No</b> to <u>regenerate the container template as appropriate</u>.</li></ol> <p data-bbox="611 972 1934 1005"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427461/Dissolving+a+Virtual+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427461/Dissolving+a+Virtual+Container</a>)</u></p> |

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|       |                            | <p data-bbox="632 248 1346 293"><b>To Delete and Recreate a Container</b></p> <ol data-bbox="646 326 1850 764" style="list-style-type: none"><li data-bbox="646 326 1499 362">1. Undock the container using the <code>virtaundock</code> command.</li><li data-bbox="646 391 1818 651">2. Do one of the following:<ol style="list-style-type: none"><li data-bbox="695 443 1818 586">a. <u>Create a backup copy of the container template. Delete the container and then make the necessary changes to the template and use the <code>virtacreate</code> /T command to recreate the container.</u></li><li data-bbox="695 618 1220 651">b. <u>Delete</u> the container and start over.</li></ol></li><li data-bbox="646 683 1850 764">3. Dock, start the container's services (if required), and run the container to confirm the changes have been made.</li></ol> <p data-bbox="611 821 1759 854"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers</a>)</u></p> |

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|       |                            | <h3 data-bbox="625 232 869 272">Disabling Tether</h3> <div data-bbox="625 305 966 349"> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read</div> <p data-bbox="625 381 1835 441">You can disable Tether after you undock a container. New file and registry entries may have been copied to the container during previous Tether activities, and so you may wish to regenerate the container template for a container when you disable Tether.</p> <p data-bbox="625 467 1887 527">You can use the Administrative Console to disable Tether and regenerate a container template. Alternatively, you can use the CLI command <code>virtapedit</code>.</p> <h4 data-bbox="625 586 1337 621">To Disable Tether and Regenerate a Container Template</h4> <ol data-bbox="632 638 1528 821" style="list-style-type: none"><li>1. Select and then undock the container for which you enabled Tether.</li><li>2. Click the <b>Tether</b> tab.</li><li>3. Click the <b>Use Tether</b> check box to de-select the check box.</li><li>4. Click <b>Save</b>.</li><li>5. To regenerate the container template for the selected container, click the <b>Yes</b> button at the prompt.</li></ol> <p data-bbox="615 878 1734 914"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394878/Disabling+Tether">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394878/Disabling+Tether</a></p> |



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|       |                            | <div><div><div>virtacreate</div><div><div><div>TF</div><div>Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read</div></div></div><div><div><div><div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div> <div><div><div></div><div></div></div></div> <div><div><div></div><div></div></div></div> <div><div><div></div><div></div></div></div> 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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate</a>)</p> <h3 data-bbox="627 289 968 329">Upgrading Containers</h3> <p data-bbox="627 363 974 407">  Owned by Thomas Farley (Deactivated) ***<br/>       Last updated: Mar 28, 2022 • 1 min read     </p> <p data-bbox="627 440 1591 464">You can upgrade existing containers using the Administrative Console or the <code>virtaupgrade</code> CLI command.</p> <p data-bbox="627 488 1556 513">Containers that require upgrading are indicated in Administrative Console by the label "Needs Upgrade".</p> <p data-bbox="627 537 1854 597"><u>When you upgrade a container, a backup folder is created in the container folder.</u> Test the upgraded container and then delete the backup folder when you are satisfied that the container is running correctly.</p> <p data-bbox="627 634 848 659">To Upgrade a Container</p> <ol data-bbox="638 678 1871 743" style="list-style-type: none"> <li>1. In the Administrative Console, select the container that requires upgrading.</li> <li>2. Select <b>Upgrade</b> in the toolbar. The status of the appliance changes to "Undocked". You can now select and dock the upgraded container.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers</a>)</p> <div data-bbox="617 873 1875 1219" style="border: 2px solid red; padding: 10px;"> <h3 data-bbox="627 881 1102 930">Deleting Containers</h3> <p data-bbox="627 971 1356 1003">You can delete a container that is no longer required.</p> <p data-bbox="627 1049 1843 1190">Use the Administrative Console <b>Delete</b> function to delete a container to make sure that a container is undocked and that none of the processes that belong to the container are still running. Do not use the operating system Delete command to delete a container.</p> </div> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/page/313884729/Moving+Compressing+and+Deleting+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/page/313884729/Moving+Compressing+and+Deleting+Containers</a>)</p> <p data-bbox="611 1377 1938 1442">Once applications are containerized using VirtaMove, “<i>backup copies of the containerized applications can be stored for recovery or distribution purposes.</i>” VirtaMove stores backup copies of containerized</p> |

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|       |                            | <p>applications, essentially copying the isolated environments to storage. This capability ensures that entire application environments, once isolated and containerized, can be replicated and stored for purposes like recovery, packaging or distribution. If containers—or containerized applications—are no longer required, they may be uninstalled—or deleted, as demonstrated above.</p> <div data-bbox="611 386 1906 1346"> <h2 style="text-align: center;">Using VirtaMove to Solve Datacenter Management Problems</h2> <p style="text-align: center;">by VALERIE YATES   May 01, 2018</p> <p>For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges in the datacenter management sphere.</p> <p><b>1. ISOLATE APPLICATIONS</b></p> <p>In industries like Insurance, Healthcare, Pharma, and Banking, customers must verify compliance to rigorous, auditable standards. Once an app is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy apps and run them in isolation on new OS and servers. Containerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server.</p> <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>If apps are <b>containerized</b>, it's easy to create exact images on new OSs such as Windows Server WS2012, WS2016, or WS2019. This eliminates the need to worry about recreating an installation process. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and cloud servers.</p> <p><b>3. STORE MASTER COPIES OF APPLICATIONS FOR DISTRIBUTION</b></p> <p>Once apps are containerized using VirtaMove, backup copies of the containerized apps can be stored for recovery, packaging, or distribution purposes. The master copy of an app stored in a container can be used to create a fresh, decluttered installation of an app, free of malware or other exposures.</p> <p><b>Read the Blog: VirtaMove – It's Not Just Application Modernization</b></p> </div> <p>(<a href="https://virtamove.com/blog/solve-datacenter-management-problems/">https://virtamove.com/blog/solve-datacenter-management-problems/</a>)</p> |

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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p><b>4. CREATE IDENTICAL APPLICATION IMAGES FOR TEST, DEVELOPMENT, OR BACKUP</b></p> <p><i>The problem:</i> Software development is a demanding business. Under pressure to meet deadlines, software developers might forget about the detailed installation scripts and configuration data required to create identical Cloud or Test copies of an application. Having identical Test and Development environments ensures that you've synchronized and are testing the current development version of software. Where identical development environments are not available, you're likely to see frequent problems with version and feature regression. Having a backup copy of both Development and Production instances is also critical for business continuity.</p> <p><i>The VirtaMove solution:</i> VirtaMove containerizes applications. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and Cloud servers, on newer OSs such as Windows Server 2008 R2 , WS2012, or WS2016. This eliminates the need to worry about recreating an installation process or scripts. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p>Using VirtaMove, applications containerized on WS2008 can run seamlessly on WS2012 or WS2016. Once applications are containerized, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, uncluttered installation of an application, free of malware or other exposures.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |                            | <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p><b>3. STORE MASTER COPIES OF APPLICATIONS FOR RECOVERY PURPOSES</b></p> <p>Once applications are containerized using VirtaMove, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, decluttered installation of an application, free of malware or other exposures.</p> <p><i>Isolate, replicate, and recover or distribute.</i> These are just three of the many benefits and uses of VirtaMove containers, which customers rely on every day. To learn more about other use cases or how VirtaMove can help accelerate and modernize your Windows Server infrastructure, please call or e-mail us.</p> <p><a href="https://virtamove.com/blog/not-just-app-modernization/">(https://virtamove.com/blog/not-just-app-modernization/)</a></p> <p>Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> |

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|       |                            | <p><b>Option 4: The better way, a stateful re-install</b></p> <p>A stateful re-install using VirtaMove migration technology and methodology gets your legacy apps to a better place without the need for a stepwise upgrade process and without the risks of an in-place OS upgrade. You get to keep all the valuable historical information that your organization depends on. VirtaMove uses a proprietary, lightweight container as a moving box for stateful apps. Our intelligent migration software automatically discovers apps across your network, and then packages them and all their components into a container on the new destination server. The containerized application is isolated from the underlying operating system and is portable. Perfect for testing on a new OS and a new server. There's no permanent reliance on our container: it can be removed at the end of the migration. When the container is removed, the app is re-installed on the new destination server. It then runs natively on a modern Windows Server OS, with all its configuration, patches, and upgrades. If you choose to run an app in a container, it can run on a hypervisor. You can reconfigure dynamically. Roll out as and where required, and use step snapshots to roll back easily if required.</p> <p><b>BENEFITS OF A STATEFUL RE-INSTALL</b></p> <p>Re-installing apps on new servers brings advantages:</p> <ul style="list-style-type: none"> <li>❑ A new server and modern OS close known security exposures.</li> <li>❑ New hardware improves performance.</li> <li>❑ Apps can be split or consolidated.</li> <li>❑ Software components, such as IIS and SQL, can be upgraded for new servers.</li> <li>❑ A re-install reduces clutter and lets you install on modern datacenter VMs or the cloud. You can manage servers with DevOps tools.</li> </ul> <p>(<a href="https://virtamove.com/blog/an-in-place-os-upgrade-isnt-the-answer/">https://virtamove.com/blog/an-in-place-os-upgrade-isnt-the-answer/</a>)</p> |

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|       |                            | <p data-bbox="625 228 1125 264">The Application Migration Process</p> <p data-bbox="625 297 953 337">  Owned by Thomas Farley (Deactivated) ***<br/> Last updated: Mar 25, 2022 • 2 min read </p> <p data-bbox="625 370 1075 394">Migrating an application involves the following steps:</p> <ol data-bbox="636 415 1879 727" style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link.</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a>.</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</li> </ol> <p data-bbox="625 789 819 824">Pre-Populate</p> <p data-bbox="625 846 1839 932">Pre-populating a container is part of the VirtaMove application migration process. Pre-population migrates remote products, services, users, and groups without requiring downtime of the application on the source server. Any locked files will not be copied over until the application is fully exercised.</p> <p data-bbox="625 959 1839 1045">Pre-populate captures components of the application while the application is up and running on the source server. You can then schedule a maintenance window at a later time for the application. It is during this maintenance window that you would stop and shut down the application before you complete the migration by exercising the application.</p> <p data-bbox="625 1073 1864 1127">Pre-populate occurs when you click the <b>Pre-Populate</b> button in the VirtaMove Administrative Console under the <b>Tether</b> tab. A window displays the status of the Pre-Populate process.</p> <p data-bbox="609 1149 1980 1219"> <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a><br/> ) </p> |



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|       |   | <p>Application install scripts and source code are often missing. If available, they're likely out of date. Using out of date install scripts means that the current state of legacy applications, with all their pre-installed patches and updates, is not captured or containerized. You've simply put the original version of the application in a box, not the legacy system version that is currently in production.</p> <p>In addition, apps that are loaded into a container are permanently dependent on the container, there's no easy rollback to a native OS install. Relying on the container as a destination means the app lives with management overhead, system overhead, and another layer of lock-in.</p> <p>Windows Docker containers won't easily run WS2003 and WS2008 legacy applications on WS2016 or WS2019, now or in the foreseeable future. We've learned from experience many issues need to be addressed to make legacy Windows apps run in a container.</p> <p>So, let's go back to our original question: Is containerizing Windows Server applications always a good idea? Containers may make sense if you're using containers for new greenfield application development or on mature Linux platforms. In this scenario you could leverage APIs, containerization, application virtualization, or a <b>microservices</b> architecture as a basis for new applications. However, using containers by default for legacy applications may not pay off given the performance and management overheads we've discussed.</p> <p><b>There's a better way: an automated, stateful, native re-install on the Host OS</b></p> <p>Instead of permanently containerizing legacy apps with all the security, performance and maintainability issues in a WDC, you could consider an alternative: an automated, stateful re-install of legacy apps on a modern server and Host OS.</p> <p>At VirtaMove, we use our own lightweight container for isolation and testing on a host server. However, there is no permanent reliance on our container: it can be removed at the end of the moving process. Free of the container, the legacy application can run natively on a modern Host Windows OS. This allows you to manage legacy applications using a conventional change management process and eliminate the permanent overheads of containers.</p> <p><a href="https://virtamove.com/blog/running-apps-containers-performance-consequences/">(https://virtamove.com/blog/running-apps-containers-performance-consequences/)</a></p> |
| 1g    | wherein the one or more isolated environments are stored for retrieval at a | The Accused Products comprises a system “wherein the one or more isolated environments are stored for retrieval at a later time after the uninstall of the one or more applications.”  |




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|       | later time after the uninstall of the one or more applications. | <p>Whether the Accused Products dissolve the application or delete the container on the destination machine, “the one or more isolated environments are stored for retrieval at a later time.”</p> <p><b>To Delete and Recreate a Container</b></p> <ol style="list-style-type: none"> <li>1. Undock the container using the <code>virtaundock</code> command.</li> <li>2. Do one of the following: <ol style="list-style-type: none"> <li>a. Create a backup copy of the container template. Delete the container and then make the necessary changes to the template and use the <code>virtacreate</code> command to recreate the container.</li> <li>b. <u>Delete</u> the container and start over.</li> </ol> </li> <li>3. Dock, start the container's services (if required), and run the container to confirm the changes have been made.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers</a>)</p> <p>Once applications are containerized using VirtaMove, “<b>backup copies of the containerized applications can be stored for recovery or distribution purposes.</b>” VirtaMove stores backup copies of containerized applications, essentially copying the isolated environments to storage. This capability ensures that entire application environments, once isolated and containerized, can be replicated and stored for purposes like recovery, packaging or distribution. If containers—or containerized applications—are no longer required, they may be uninstalled—or deleted, as demonstrated above.</p> |

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|       |                            | <div data-bbox="611 207 1906 1167"><h2 data-bbox="795 224 1743 354">Using VirtaMove to Solve Datacenter Management Problems</h2><p data-bbox="1142 386 1392 406">by VALERIE YATES   May 01, 2018</p><p data-bbox="651 479 1824 539">For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges in the datacenter management sphere.</p><h3 data-bbox="651 565 963 584">1. ISOLATE APPLICATIONS</h3><p data-bbox="651 605 1860 740">In industries like Insurance, Healthcare, Pharma, and Banking, customers must verify compliance to rigorous, auditable standards. Once an app is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy apps and run them in isolation on new OS and servers. Containerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server.</p><h3 data-bbox="651 766 1375 786">2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3><p data-bbox="651 807 1860 904">If apps are <b>containerized</b>, it's easy to create exact images on new OSs such as Windows Server WS2012, WS2016, or WS2019. This eliminates the need to worry about recreating an installation process. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and cloud servers.</p><h3 data-bbox="651 930 1425 950">3. STORE MASTER COPIES OF APPLICATIONS FOR DISTRIBUTION</h3><p data-bbox="651 971 1852 1068">Once apps are containerized using VirtaMove, backup copies of the containerized apps can be stored for recovery, packaging, or distribution purposes. The master copy of an app stored in a container can be used to create a fresh, decluttered installation of an app, free of malware or other exposures.</p><p data-bbox="651 1104 1253 1123"><b>Read the Blog: VirtaMove – It's Not Just Application Modernization</b></p></div> <p data-bbox="611 1203 1505 1235"><a href="https://virtamove.com/blog/solve-datacenter-management-problems/">(https://virtamove.com/blog/solve-datacenter-management-problems/)</a></p> |

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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p><b>4. CREATE IDENTICAL APPLICATION IMAGES FOR TEST, DEVELOPMENT, OR BACKUP</b></p> <p><i>The problem:</i> Software development is a demanding business. Under pressure to meet deadlines, software developers might forget about the detailed installation scripts and configuration data required to create identical Cloud or Test copies of an application. Having identical Test and Development environments ensures that you've synchronized and are testing the current development version of software. Where identical development environments are not available, you're likely to see frequent problems with version and feature regression. Having a backup copy of both Development and Production instances is also critical for business continuity.</p> <p><i>The VirtaMove solution:</i> VirtaMove containerizes applications. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and Cloud servers, on newer OSs such as Windows Server 2008 R2 , WS2012, or WS2016. This eliminates the need to worry about recreating an installation process or scripts. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p>Using VirtaMove, applications containerized on WS2008 can run seamlessly on WS2012 or WS2016. Once applications are containerized, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, uncluttered installation of an application, free of malware or other exposures.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |                            | <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p><b>3. STORE MASTER COPIES OF APPLICATIONS FOR RECOVERY PURPOSES</b></p> <p>Once applications are containerized using VirtaMove, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, decluttered installation of an application, free of malware or other exposures.</p> <p><i>Isolate, replicate, and recover or distribute.</i> These are just three of the many benefits and uses of VirtaMove containers, which customers rely on every day. To learn more about other use cases or how VirtaMove can help accelerate and modernize your Windows Server infrastructure, please call or e-mail us.</p> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> <p>6. Run VirtaMove Dissolve if you want to <u>remove the migration container from the application and transfer the application</u> to the underlying operating system on the destination machine so that <u>the application will behave as if natively installed</u>. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</p> |

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|       |                            | <h2 data-bbox="630 224 1108 276">Dissolving a Container</h2> <div data-bbox="630 324 1108 386"> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</div> <p data-bbox="630 435 1869 613"><u>After you have migrated an application and exercised it, you can choose to dissolve the migration container. This transfers the application to the underlying operating system of the destination machine so that the migrated application behaves as if it had been installed there. All dependencies on VirtaMove are removed.</u></p> <p data-bbox="611 673 1827 711"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394908/Dissolving+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394908/Dissolving+a+Container</a>)</u></p> |

## About Dissolve



Owned by Thomas Farley (Deactivated) \*\*\*

Last updated: Mar 28, 2022 • 4 min read

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Dissolve is a VirtaMove CLI utility that lets you remove VirtaMove encapsulation from the migration container and transfer the migrated application to the underlying operating system of the destination machine so that the application will behave as if natively installed.

There is no limit to the number of times that you can run the `virtadissolve` command on an appliance. If your VirtaMove license key does not include Dissolve, contact your VirtaMove Sales Representative to inquire about evaluating the Dissolve function.

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve</a>)</p> <p>The Accused Products allow for backing up containers and deleting said containers after application migration to the destination machine.</p> <h2 data-bbox="638 410 1192 467">To Prepare for Dissolve</h2> <ol style="list-style-type: none"> <li data-bbox="653 496 1829 586">1. Uncompress the container if it is compressed: in the Administrative Console, select the container, and then click <b>Uncompress</b>.</li> <li data-bbox="653 615 1845 756">2. If services are associated with the selected container and these services are running, click the <b>Services</b> tab, then right-click each service and select <b>Stop</b> to stop the services.</li> <li data-bbox="653 786 879 818">3. Click <b>Undock</b>.</li> <li data-bbox="653 847 968 880">4. Click the <b>Tether</b> tab.</li> <li data-bbox="653 909 1644 941">5. Disable Tether if it is enabled: de-select the <b>Enable Tether</b> check box.</li> <li data-bbox="653 971 835 1003">6. Click <b>Save</b>.</li> <li data-bbox="653 1032 1845 1073">7. At the prompt, click <b>Yes</b> or <b>No</b> to <u>regenerate the container template as appropriate</u>.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427461/Dissolving+a+Virtual+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427461/Dissolving+a+Virtual+Container</a>)</p> |

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|       |                            | <h2>Disabling Tether</h2> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read</p> <p>You can disable Tether after you undock a container. New file and registry entries may have been copied to the container during previous Tether activities, and so you may wish to regenerate the container template for a container when you disable Tether.</p> <p>You can use the Administrative Console to disable Tether and regenerate a container template. Alternatively, you can use the CLI command <code>virtapedit</code>.</p> <h3>To Disable Tether and Regenerate a Container Template</h3> <ol style="list-style-type: none"><li>1. Select and then undock the container for which you enabled Tether.</li><li>2. Click the <b>Tether</b> tab.</li><li>3. Click the <b>Use Tether</b> check box to de-select the check box.</li><li>4. Click <b>Save</b>.</li><li>5. To regenerate the container template for the selected container, click the <b>Yes</b> button at the prompt.</li></ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394878/Disabling+Tether">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394878/Disabling+Tether</a>)</p> |



## virtacreate



Owned by Thomas Farley (Deactivated) \*\*\*  
Last updated: Mar 28, 2022 • 1 min read

This command creates or updates a container. Administrator privileges are required.

You cannot create a container if [shortnames](#) are disabled (if `NtfsDisable8dot3NameCreation` is set to 1 in the registry key `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\File System`).

## Syntax

```
1 VIRTACREATE Appliance /E
```


```
1 VIRTACREATE Appliance /C <path_to_appliance_to_clone>
```

```
1 VIRTACREATE Appliance /N <path_to_template>
```


```
1 VIRTACREATE Appliance /T <path_to_template> [<server|server username password>]
```


## Options


| Option    | Description  |
|-----------|--|
| Appliance | Full path of the container to create or update. The path cannot contain spaces.  |
| /E        | Create a container with no file set (contains only VirtaMove proprietary files and properties).  |
| /C        | Clone a container.   |
| /N        | Create a container from a container template.  |
| /T        | Create a container from a container template using tether. Credentials can be provided. If <a href="#">VirtaMove Source Agent</a> is installed on the source machine, you do not need to provide credentials for the source machine. |



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|       |  | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate</a>)</p> <h3 data-bbox="632 289 984 331">Upgrading Containers</h3> <div data-bbox="632 367 993 412">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read         </div> <p data-bbox="632 444 1640 472">You can upgrade existing containers using the Administrative Console or the <code>virtaupgrade</code> CLI command.</p> <p data-bbox="632 496 1602 524">Containers that require upgrading are indicated in Administrative Console by the label "Needs Upgrade".</p> <p data-bbox="632 548 1913 613">When you upgrade a container, a backup folder is created in the container folder. Test the upgraded container and then delete the backup folder when you are satisfied that the container is running correctly.</p> <p data-bbox="632 646 861 673">To Upgrade a Container</p> <ol data-bbox="632 695 1934 764" style="list-style-type: none"> <li>1. In the Administrative Console, select the container that requires upgrading.</li> <li>2. Select <b>Upgrade</b> in the toolbar. The status of the appliance changes to "Undocked". You can now select and dock the upgraded container.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313622641/Upgrading+Containers</a>)</p> |
| 2     | <p>The system according to claim 1, wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.</p> | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system “wherein the one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments.”</p> <p>For example, “[a]n application can run in an VirtaMove container, isolated from other applications.”</p>   |


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|       |                            | <div data-bbox="777 232 1705 297"> <h2>Help Guide Us to the Promised Land</h2> </div> <div data-bbox="1100 324 1373 347"> <p>by NIGEL STOKES   March 01, 2016</p> </div> <div data-bbox="632 417 1856 516"> <p>At VirtaMove, we work closely with customers to understand business requirements and drivers. The future road map and enhancement list for our products is driven by how customers use our solutions. <b>VirtaMove technology</b> has helped in Banking, Finance, Pharmaceutical, Healthcare, and Retail and many other industries.</p> </div> <div data-bbox="632 547 1856 609"> <p>Even though <b>Windows Server 2003</b> is now under time limited extended support, there are more than 10 million servers still running on it.</p> </div> <div data-bbox="632 641 1648 670"> <p>Let's take a closer look at some of the ways VirtaMove can alleviate modernization pain points, across industries:</p> </div> <div data-bbox="642 699 1845 1282"> <ul style="list-style-type: none"> <li>❑ Leave old OS in the dust: VirtaMove can migrate an application from Windows Server 2000, Windows Server 2003, or Windows Server 2008 to a new Windows Server 2008 R2 or Windows Server 2012/R2 OS, without the pain and time commitment of reinstallation.</li> <li>❑ Migrate and upgrade in one step: VirtaMove can migrate Microsoft IIS data and components from an old operating system to new operating system while upgrading to a newer version of IIS on the destination server, in one easy, magic step.</li> <li>❑ Get on board the Cloud: VirtaMove can migrate enterprise Windows server applications to a public or private cloud like Azure, IBM Softlayer or Amazon.</li> <li>❑ Distribute your applications: VirtaMove puts your applications in containers, and you can distribute these containers across different environments for different purposes. Turn these containers on when you need them for testing and development, for example, and then turn them off when you don't. Compress containers and keep them – the "gold image" can be handy for application recovery and DR.</li> <li>❑ Isolate your applications: An application can run in an VirtaMove container, isolated from other applications and abstracted from operating system drives on the destination server. For example, isolation is helpful in Citrix environments when operating system drives on the source server don't match operating system drives on the destination server – eliminating the headache of drive mapping for you.</li> </ul> </div> <div data-bbox="600 1338 1451 1375"> <p>(<a href="https://virtamove.com/blog/help-guide-us-to-the-promised-land/">https://virtamove.com/blog/help-guide-us-to-the-promised-land/</a>)</p> </div> |

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|       |                            | <p>VirtaMove’s containers are “isolated environments,” where applications are able to run. Indeed, containerized applications are isolated from other applications, whether they are natively installed or in their own respective containers, and from the underlying operating system.</p> <h2 data-bbox="636 378 1211 427">About Migrating Applications</h2> <div data-bbox="636 467 1073 524">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read         </div> <p>VirtaMove Application Migration is an intelligent discovery tool that migrates an application and its dependencies from a tethered source machine to a destination machine. <u>VirtaMove extracts existing enterprise applications and packages them into a container that can be provisioned and run natively on any operating system,</u> machine, or cloud.</p> <p>To migrate an application, VirtaMove is not required on the source machine. VirtaMove is required on the destination machine to tether to the application on the source machine and run the migrated virtual application appliance on the destination machine.</p> <p><u>Once you have migrated the application, you can then dissolve the application to the underlying operating system using VirtaMove Dissolve.</u></p> <p>You use the VirtaMove Administrative Console to migrate an application.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310444457/About+Migrating+Applications">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310444457/About+Migrating+Applications</a>)</p> |


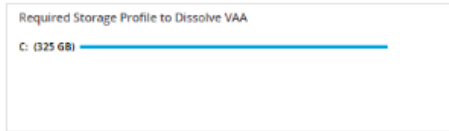
| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p data-bbox="627 220 1199 261">The Application Migration Process</p> <div data-bbox="634 302 1003 347">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read         </div> <p data-bbox="634 383 1142 407">Migrating an application involves the following steps:</p> <ol data-bbox="634 435 1478 1013" style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines.<br/>See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link.</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. <u>Create a virtual container and connect it to the source machine.</u></li> <li>4. <u>Pre-populate the virtual container with applications,</u> services, accounts, components, and files selected from the source machine.</li> <li>5. <u>Run your virtualized application on the destination machine</u> and exercise the application. See <a href="#">Running and Exercising Your Application</a>.</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and <u>transfer the application to the underlying operating system</u> on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</li> </ol> <p data-bbox="611 1068 1982 1138">(https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process)</p> |

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|       |                            | <h2 data-bbox="642 237 1325 285">Upgrading Dissolved Applications</h2> <div data-bbox="642 334 1094 391"> Owned by Thomas Farley (Deactivated) ***<br/>Mar 03, 2022 • 1 min read</div> <p data-bbox="642 435 1675 651"><u>If you do not dissolve a container and choose to run the migrated application in the container, patch or upgrade tools must run inside the container and not on the underlying operating system.</u> This approach should work if an MSI installer is not used. If there is an MSI installer, then you should dissolve the container and try the upgrade again.</p> <p data-bbox="611 691 1976 724"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460195/Upgrading+Dissolved+Applications">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460195/Upgrading+Dissolved+Applications</a></p> |

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|       |                            | <h2 data-bbox="625 224 1528 272">Step 3: Test the Application in the Container</h2> <div data-bbox="625 321 1087 386">  Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 2 min read         </div> <p data-bbox="625 427 1684 646">Once the migration container is prepopulated with the application and its dependencies, <u>you can start testing the application in the container</u> to make sure that it performs as expected. The Testing team will exercise the application, which means using all its features and functions so that V-Maestro is able to capture these elements in a complete migration template.</p> <p data-bbox="625 682 1612 760">The testing team will RDP into the destination machine to start the application and perform the exercise operation.</p> <div data-bbox="630 824 940 1006">  </div> <p data-bbox="611 1068 1978 1141"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671696/Step+3+Test+the+Application+in+the+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671696/Step+3+Test+the+Application+in+the+Container</a>)</u></p> <p data-bbox="611 1177 1969 1360">“[T]he one or more applications are isolated from other applications and a host operating system while the one or more applications run within the one or more isolated environments” until the applications are dissolved. “Dissolve is a VirtaMove CLI utility that lets you <i>remove VirtaMove encapsulation from the migration container and transfer the migrated application to the underlying operating system of the destination machine</i> so that the application will behave <i>as if natively installed.</i>”</p> |

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|       |                            | <p data-bbox="625 219 865 256"><b>About Dissolve</b></p> <div data-bbox="625 293 980 339">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 4 min read         </div> <p data-bbox="625 373 798 394"><b>Table of Contents</b></p> <ul data-bbox="632 423 1255 764" style="list-style-type: none"> <li>• <a href="#">The Dissolve Process</a></li> <li>• <a href="#">Application-Specific User and Group Accounts</a></li> <li>• <a href="#">Dissolve and Drive Letters</a></li> <li>• <a href="#">Dissolve and vdrives</a></li> <li>• <a href="#">Using Config-on-the-fly with Dissolve</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Enable Config-on-the-fly Using the Administrative Console</a></li> </ul> </li> <li>• <a href="#">Config-on-the-fly on Demand and Dissolve</a></li> <li>• <a href="#">Dissolving IIS Applications</a></li> <li>• <a href="#">Enabling Dissolve for an Existing Installation</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Enable Dissolve for an Existing VirtaMove Installation</a></li> </ul> </li> </ul> <hr data-bbox="625 800 1432 803"/> <div data-bbox="625 846 1432 976" style="border: 2px solid red; padding: 5px;"> <p>Dissolve is a VirtaMove CLI utility that lets you remove VirtaMove encapsulation from the migration container and transfer the migrated application to the underlying operating system of the destination machine so that the application will behave as if natively installed.</p> </div> <p data-bbox="625 1003 1432 1101">There is no limit to the number of times that you can run the <code>virtadissolve</code> command on an appliance. If your VirtaMove license key does not include Dissolve, contact your VirtaMove Sales Representative to inquire about evaluating the Dissolve function.</p> <p data-bbox="611 1151 1719 1187"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460124/About+Dissolve</a></p> |



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|       |  | <h3 data-bbox="632 224 1377 264">Step 4: Optionally Dissolve the Container</h3> <div data-bbox="632 310 1041 358">  Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read         </div> <div data-bbox="627 399 1587 553" style="border: 2px solid red; padding: 5px;"> <p data-bbox="627 399 1587 553">If you don't want to leave the migrated application to run in the container on the destination, you can choose to remove the migration container and push the application to the operating system of the destination, where it will behave as if natively installed. For information about Dissolve, see the VirtaMove Administration Guide.</p> </div> <p data-bbox="627 586 1518 651">You must make sure that the destination has adequate storage to accommodate Dissolve. The required storage profile is indicated in the Destination Details window.</p> <div data-bbox="632 699 1077 829">  </div> <p data-bbox="627 878 1566 951">For additional information about Dissolve storage requirements, see <a href="#">Discovering Capacity Requirements</a>.</p> |
| 3     | The system according to claim 1 comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces. | The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system “comprising one or more interception layers configured to intercept access to host operating system resources and host operating system interfaces.”   |


| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <h2 data-bbox="625 219 827 277">Docking</h2> <p data-bbox="625 310 1835 402">Docking a container integrates and prepares the container's environment as part of the underlying operating system so that the application is ready to run.</p> <p data-bbox="625 443 1822 589">When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p data-bbox="625 630 1850 885">VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed wher docking fails:</p> <p data-bbox="632 930 1577 966"><u>Failed to intercept OS calls. Sanity test failed. Cannot dock.</u></p> <p data-bbox="611 1024 1980 1092">(https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Container<br/>s)</p> |

| Claim                   | US 8,943,500<br>Claim Term   | Analysis  |                         |  |           |
|-------------------------|--|---|-------------------------|--|-----------|
|                         |  | <p><b>Dock Intercept</b></p> <p><b>This is a blocking issue.</b></p> <p>This section indicated whether the sanity test has passed or not on the destination machine. <u>VirtaMove requires the ability to intercept system calls between the application and the operating system on the destination machine.</u> Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as antivirus software or group account permissions.</p> <p>The following error message may be displayed when Audit fails:</p> <pre>1 Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit</a>)</p> <table border="1"> <tr> <td data-bbox="625 954 955 1279">CPROP_INTERCEPT_V<br/>ER</td><td data-bbox="955 954 1648 1279"><u>The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</u></td><td data-bbox="1648 954 1858 1279">Read-only</td></tr> </table> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties</a>)</p> | CPROP_INTERCEPT_V<br>ER | <u>The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</u> | Read-only |
| CPROP_INTERCEPT_V<br>ER | <u>The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</u> | Read-only   |                         |  |           |

| Claim               | US 8,943,500<br>Claim Term  | Analysis  |                     |   |           |
|---------------------|---|---|---------------------|---|-----------|
| 4                   | The system according to claim 3, wherein the one or more interception layers intercept calls to the host operating system and system libraries created by the one or more applications.                           | <p>The Accused Products comprise a system as claimed in claim 3. <i>See</i> claim 3. The Accused Products comprise a system, “wherein the one or more interception layers intercept calls to the host operating system and system libraries created by the one or more applications.”</p> <table border="1" data-bbox="613 350 1904 477"> <tr> <td data-bbox="613 350 959 477">CPROP_INTERCEPT_VER</td><td data-bbox="959 350 1688 477">The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</td><td data-bbox="1688 350 1904 477">Read-only</td></tr> </table> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties</a>)</p> <h3 data-bbox="613 591 743 630">Docking</h3> <p data-bbox="613 649 1892 708">Docking a container integrates and prepares the container’s environment as part of the underlying operating system so that the application is ready to run.</p> <p data-bbox="613 734 1843 792">When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p data-bbox="613 818 1885 909">VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed when docking fails:</p> <div data-bbox="613 935 1211 958" style="background-color: #f0f0f0; padding: 2px;"> <p>Failed to intercept OS calls. Sanity test failed. Cannot dock.</p> </div> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers</a>)</p> | CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only |
| CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only   |                     |   |           |

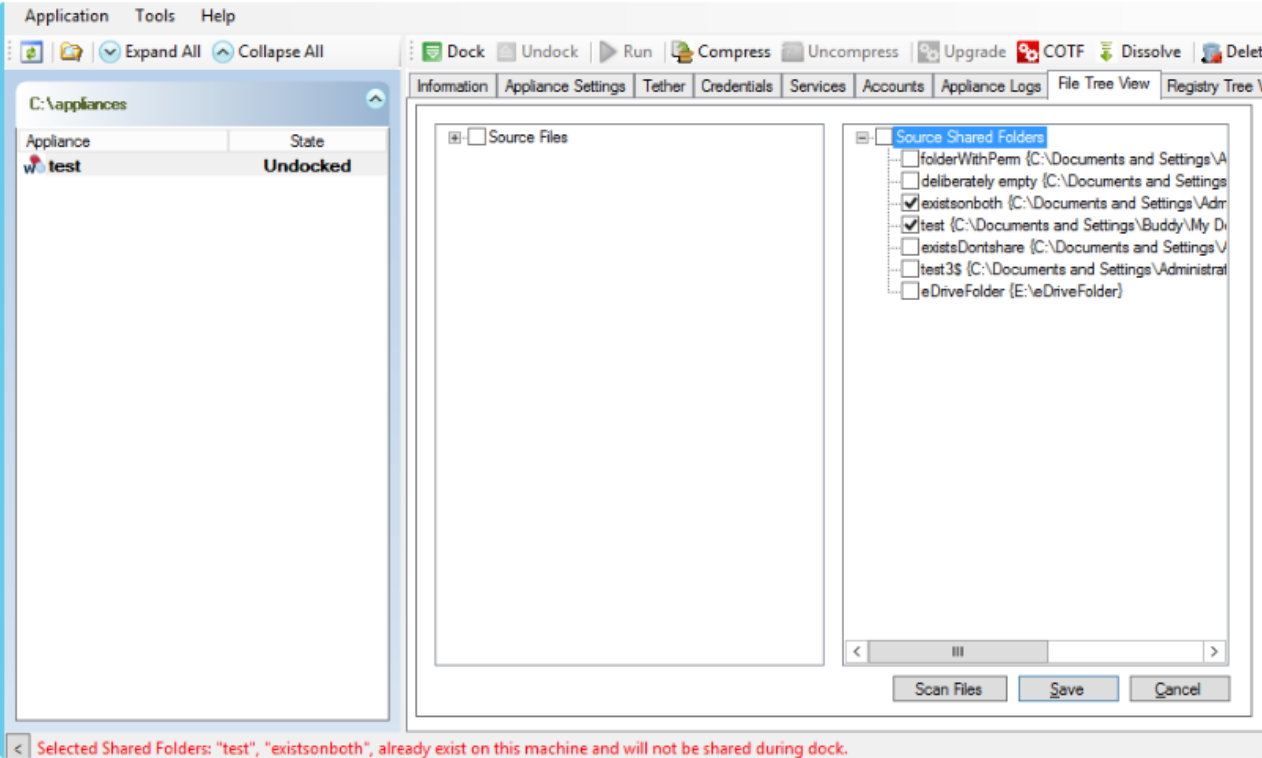
| Claim               | US 8,943,500<br>Claim Term  | Analysis   |                     |   |           |
|---------------------|---|--|---------------------|---|-----------|
|                     |   | <p><b>Dock Intercept</b></p> <p><b>This is a blocking issue.</b></p> <p>This section indicated whether the sanity test has passed or not on the destination machine. VirtaMove requires the ability to intercept system calls between the application and the operating system on the destination machine. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as antivirus software or group account permissions.</p> <p>The following error message may be displayed when Audit fails:</p> <pre>1 Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit</a>)</p>   |                     |   |           |
| 5                   | The system according to claim 1 comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.              | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system “comprising an interception database configured to maintain mapping between host operating system resources inside the one or more isolated environments and outside.”</p> <p>For example, “[t]he VirtaMove version that monitors the container properties and <i>system intercepts</i> to ensure the application runs smoothly, <i>just as it would if normally installed directly into the underlying operating system.</i>”</p> <table border="1"> <tr> <td>CPROP_INTERCEPT_VER</td><td>The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</td><td>Read-only</td></tr> </table> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties</a>)</p> | CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only |
| CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only  |                     |   |           |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p><b>Docking</b></p> <p>Docking a container integrates and prepares the container's environment as part of the underlying operating system so that the application is ready to run.</p> <p>When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p>VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed when docking fails:</p> <pre>Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers</a>)</p> <p><b>Dock Intercept</b></p> <p><b>This is a blocking issue.</b></p> <p>This section indicated whether the sanity test has passed or not on the destination machine. VirtaMove requires the ability to intercept system calls between the application and the operating system on the destination machine. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as antivirus software or group account permissions.</p> <p>The following error message may be displayed when Audit fails:</p> <pre>1 Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <h3 data-bbox="625 215 974 256">Mapping System Drives</h3> <div data-bbox="625 289 953 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read         </div> <p data-bbox="625 362 1791 418">VirtaMove supports the deployment of containers where the source and destination machines have different system drives. However, the destination machine must have a local drive assigned the same drive letter as the source machine's system drive.</p> <p data-bbox="625 443 1801 467">You can use the <code>virtavdrive</code> command to map the system drive from the source machine to a system drive on the destination machine.</p> <p data-bbox="625 492 737 516">For example:</p> <p data-bbox="625 540 726 565"><b>Scenario 1:</b></p> <p data-bbox="625 589 764 613">Source machine</p> <p data-bbox="625 621 758 646">Local Drives: C:</p> <p data-bbox="625 654 764 678">System Drive: C:</p> <p data-bbox="625 703 800 727">Destination machine</p> <p data-bbox="625 735 758 760">Local Drives: E:</p> <p data-bbox="625 768 764 792">System Drive: E:</p> <pre data-bbox="632 824 1104 849">1 virtavdrive c:\appliances\mycontainer move c e</pre> <p data-bbox="625 881 726 906"><b>Scenario 2:</b></p> <p data-bbox="625 930 764 954">Source machine</p> <p data-bbox="625 963 779 987">Local Drives: C, E:</p> <p data-bbox="625 995 764 1019">System Drive: E:</p> <p data-bbox="625 1044 800 1068">Destination machine</p> <p data-bbox="625 1076 779 1101">Local Drives: C, E:</p> <p data-bbox="625 1109 764 1133">System Drive: C:</p> <pre data-bbox="632 1166 1094 1190">1 virtavdrive c:\appliances\mycontainer move e c</pre> <p data-bbox="611 1263 1843 1295">(https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263679/Mapping+System+Drives)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <p data-bbox="632 224 1482 272"><b>Mapping NICs between Source and Destination</b></p> <p data-bbox="632 293 1902 406">You can use COTF to add or remove NICs to match the number of NICs on the source machine, using selected NICs as COTF parameters. For example, the source machine might have more NICs than the destination. The parameters are stored in the <code>ipCOTF.xml</code> file in the <code>COTF</code> folder for the selected appliance.</p> <p data-bbox="632 433 1982 500">If there is a NIC mismatch, the Administrative Console will display a message. You can map the IP addresses manually if you need to correct the mismatch.</p> <p data-bbox="611 540 1745 576"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly</a>)</p> |



| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p><b>Conflicts and Shared Folders</b></p> <p>When you select a shared folder, it's possible that it may conflict with a shared folder on the destination machine. In this case, a warning message will appear in the status bar at the bottom of the Administrative Console.</p>  <p>The screenshot shows the Administrative Console interface. On the left, a pane titled 'C:\appliances' contains a table with two columns: 'Appliance' and 'State'. The table has one row with 'test' in the 'Appliance' column and 'Undocked' in the 'State' column. The main area of the console is divided into two panes. The left pane is titled 'Source Files' and is empty. The right pane is titled 'Source Shared Folders' and contains a list of folders with checkboxes next to them. The folders are: 'folderWithPerm (C:\Documents and Settings\A...', 'deliberately empty (C:\Documents and Settings\Adm...', 'existsonboth (C:\Documents and Settings\Adm...', 'test (C:\Documents and Settings\Buddy\My D...', 'existsDontshare (C:\Documents and Settings\V...', 'test3\$ (C:\Documents and Settings\Administrat...', and 'eDriveFolder (E:\eDriveFolder)'. The 'existsonboth' and 'test' folders are checked. At the bottom of the console, a status bar displays a red warning message: 'Selected Shared Folders: "test", "existsonboth", already exist on this machine and will not be shared during dock.'</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders</a>)</p> |

## Using Filters



Owned by Thomas Farley (Deactivated) \*\*\*  
Mar 02, 2022 • 1 min read

Use VirtaMove filters to exclude specific paths and registry files from a migration.

### You can do this:

- when you create a container
- during tether, or
- when you dissolve, to make sure that specific paths are not transferred to the underlying operating system; for example, to exclude VirtaMove executables


### Define filters by:


- editing `userdefinedfilter` and adding nodes where appropriate, or
- creating filters based on the environments or applications you want to migrate


You create filters by adding a Custom filter entity to the `FilterList.xml` file and copying the custom filter into the `<Installation Directory>\Filters\Custom` folder. The syntax should follow existing filters.

### Filters

|   |  |
|---|--|
| <code>&lt;Installation Directory&gt;\Filters\VirtaMoveDissolveExcludes.xml</code> | Contains path and registry filters that will automatically be copied to every container that is created. Useful for excluding OS-dependent information from a migration.                                 |
| <code>&lt;Installation Directory&gt;\Filters\VirtaMoveFilter.xml</code>           | This filter excludes all VirtaMove-related products. Useful for excluding VirtaMove Source Agent files.  |
| <code>&lt;Installation Directory&gt;\Filters\FilterList.xml</code>                | Contains a list of all the filters in a container.   |
| <code>&lt;Installation Directory&gt;\Filters\Custom\DotNet.xml</code>             | A custom filter used to exclude .NET files and registry keys, so that they maintain their integrity on the underlying operating system.  |
| <code>&lt;Installation Directory&gt;\Filters\Custom\LogAndTempFilter.xml</code>   | A custom filter used to exclude all log and temporary files, which are usually huge and do not need to be migrated to the new server. Excluding these files speeds up the pre-populate and COTF process. |
| <code>&lt;Installation Directory&gt;\Filters\Custom\UserDefinedFilter.xml</code>  | Stores user-defined filters, which will automatically be used by all filters.  |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311066652/Using+Filters">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311066652/Using+Filters</a>)</p> <p><b>Dissolve and Shared Folders</b> </p> <p>During Dissolve, shared folders will be set up to their respective dissolved folder locations. A migrated shared folder will be set up during Dissolve only if the location of the associated directory is not being merged with an existing location.</p> <p>If a folder exists at the dissolve location before dissolving, the shared folder will not be set up.</p> <p>See <a href="#">Migrating Folders, Shared Folders, and Registries</a> for information about how to migrate shared folders.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders</a>)</p> <p>11. Navigate to the <b>Services</b> tab at the top of the Administrative Console. Edit the User Name and Password for a service as appropriate. Note that you are setting a password only; VirtaMove does not validate a password against the original password associated with the source machine. You cannot edit passwords after you click <b>Dock</b>. Service User Names must be in the format domain\uid, where uid is the user identifier. This is a restriction of the Microsoft Win32 functions for working with the Service Control Manager (SCM), which is used by VirtaMove.</p> <ul style="list-style-type: none"> <li>◦ If you select a service and the service is "Started" on the source machine, tethering will not succeed. Stop the service before tethering by right-clicking the service and then selecting <b>Stop Source Service</b>.</li> <li>◦ If you select a service and the service already exists on the underlying operating system, the <b>Source Status</b> column will display "CONFLICT". Resolve the conflict and then press F5 to refresh the list.</li> </ul> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311132184/Migrating+an+Application+Using+the+VirtaMove+Administrative+Console">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311132184/Migrating+an+Application+Using+the+VirtaMove+Administrative+Console</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <p><b>Testing Containers</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</p> <p><b>Table of Contents</b></p> <ul style="list-style-type: none"> <li>• <a href="#">About Testing Containers</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Testing Requirements</a></li> </ul> </li> <li>• <a href="#">Testing a Container</a></li> <li>• <a href="#">What If I Find Problems During Testing?</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Delete and Recreate a Container</a></li> </ul> </li> </ul> <p><b>About Testing Containers</b></p> <p>You can test a container to make sure that the appliance runs correctly. Testing a container may include testing container services, for example. Once you are satisfied that the container runs correctly, you can then move the appliance to the destination machine.</p> <p>You can test an appliance on either the source machine or the destination machine.</p> <p><b>Testing Requirements</b></p> <p>If you are testing on the destination machine, make sure that the environment is configured to meet the configuration requirements of the application or service in the appliance. For more information, see your application documentation for system configuration requirements.</p> <p>To avoid service conflicts where appliances with services from the source machine already exist on the destination, VirtaMove will display an error message and prevent the local service from starting. You must resolve this conflict by either removing the service from the destination or removing the service from the container.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <h2 data-bbox="617 224 936 266">Using Tether Sync</h2> <div data-bbox="617 305 1022 358">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 4 min read         </div> <h3 data-bbox="617 399 812 423">Table of Contents</h3> <ul data-bbox="617 456 1031 686" style="list-style-type: none"> <li>• <a href="#">Update Mode</a></li> <li>• <a href="#">Reset Mode</a></li> <li>• <a href="#">What Gets Synced?</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Use Tether Sync</a></li> <li>◦ <a href="#">To Use Tether Sync Using the CLI</a></li> </ul> </li> <li>• <a href="#">Tether Synch Log</a></li> </ul> <hr data-bbox="617 727 1541 730"/> <p data-bbox="617 781 1507 1052">Tether Sync allows a container to be populated with files and registry keys and then updated later. The Tether Sync feature is useful if you are not able to move some files (e.g., locked databases) right away but instead, need to wait for a service window. In a case like this, Tether Sync allows you to tether as much at the source as possible in advance and then re-connect later during a service window in order to finish the migration. Any new or different files/keys will be re-copied from the source, and files/keys that have been removed from the source will also be removed.</p> <p data-bbox="617 1084 1503 1154">A container must be undocked to apply Tether Sync. An application will not start until the Tether Sync process is complete.</p> <p data-bbox="617 1187 856 1211">Tether Sync modes are:</p> <ul data-bbox="617 1243 730 1317" style="list-style-type: none"> <li>• Update</li> <li>• Reset</li> </ul> |

## Update Mode

Using Update Mode, any files or keys that are newest will be copied. If you changed a file on both the source and destination machines, the newest file will be copied. Changes that have been made to the destination machine may not be preserved in Update Mode. You should therefore keep track of changes that were made to the destination for re-hosting or other reasons because these changes may need to be repeated.

### Example Use:

An application has been tethered to a destination machine. Work has been performed on the destination machine, for example testing or re-configuration. Later, when you want to finalize the migration, you re-tether to the original production machine to get any files that have been updated or added. For example, a website installation to which changes have been made. In this case, you would use Update Mode to avoid losing modifications to the destination machine.

## Reset Mode

Using Reset Mode, any files or keys that are different between the source and destination machines will be overwritten. Changes that have been made to the container on the destination machine will not be preserved in Reset Mode. You should therefore keep track of changes that were made to the destination for re-hosting or other reasons because these changes will need to be repeated.


### Example Use:

An application has been migrated for user acceptance testing (UAT) and has been extensively exercised. It's possible that files have been modified, added, or removed during UAT and these changes are not wanted on the production server. In this case, Reset Mode would return the container to the original state it was in and copy any additional changes from the source machine.

### Caution:



VirtaMove does not recommend that you perform a Tether Sync in Reset Mode for an IIS application migration. This mode will undo all changes, including any modifications made by IIS migration scripts. IIS services may not start if you perform a Tether Sync in Reset Mode for an IIS application migration.

| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <p><b>What Gets Synced?</b></p> <p>Tether Sync does not synchronize everything on the source machine to the destination machine. Only paths and keys that have previously been tethered will be checked against the source machine. Specifically, individual files that have been copied will be checked against the source machine as well as paths that were copied in entirety (greedy copied).</p> <p><b>For example:</b></p> <p>If you have a complete copy of "<code>\Program Files\SQL Server</code>" and you add directory "<code>\Program Files\SQL Server\some_folder</code>", then a sync operation will copy "<code>some_folder</code>" to the destination machine because the "<code>SQL Server</code>" folder was greedy copied. If you add "<code>\Program Files\some_other_folder</code>", it will not be copied because it is outside of the paths that were greedy copied.</p> <p>To see which paths will be synced, see the <code>tether_greedy_roots.dat</code> file in the container folder. This file contains a list of paths that are meant to be synchronized with the source.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><b>Migrating Scheduled Tasks</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 4 min read</p> <p>You can migrate scheduled tasks using the Administrative Console or the CLI using <code>virtatasks</code>.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If you want to migrate user-defined environment variables along with a scheduled task, select and migrate the user account on the <b>Source Accounts</b> tab.</li> <li>• Docking or dissolving a container installs a task to the underlying operating system. In doing so, VirtaMove maintains the folder structure that was on the source machine. For Windows Server 2008 and later sources, tasks can be nested under layers of folders. If these folders do not exist when a task is being installed, they will be created on the destination machine to store the task. Undocking the container removes the task from the underlying operating system. However, any folders that were created to store the task will not be removed.</li> </ul> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296093/Migrating+Scheduled+Tasks">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296093/Migrating+Scheduled+Tasks</a>)</p> <p><b>Locking or Unlocking a Container</b></p> <p>You can lock a selected container to make sure that it is not modified during the migration process. Modifications could result in the application not running correctly after the tether process. You can then unlock the container once you're done.</p> <p><b>To Lock a Container</b></p> <ol style="list-style-type: none"> <li>1. Select a container, and then select <b>Tools&gt;Lock/Unlock VAA</b>.</li> <li>2. Enter a password in the first field. Take note or remember this password for when you want to unlock the container.</li> <li>3. Confirm the password in the second field, then click <b>OK</b>.</li> </ol> <p><b>To Unlock a Container</b></p> <ol style="list-style-type: none"> <li>1. Select the locked container, and then select <b>Tools&gt;Lock/Unlock VAA</b>.</li> <li>2. Enter the password you created to lock the container, then click <b>OK</b>.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Locking-or-Unlocking-a-Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Locking-or-Unlocking-a-Container</a>)</p> |





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|       |                            | <p data-bbox="625 224 1163 261"><b>What Happens if a File Isn't Copied?</b></p> <p data-bbox="625 280 1885 375">The tethering process will fail to copy a file or any file under a folder from the source machine if, for example, a file is locked on the source machine by a service or a running application or if the connection to the source machine is lost. If this occurs, the tethering process will not mark such a file as "COMPLETE" until the file is physically copied over from the source machine.</p> <p data-bbox="625 394 1885 456">If the application requests a file that was not successfully copied over previously, the tethering process will continue to try to copy the file from the source machine until the copy operation is successful.</p> <p data-bbox="611 500 1797 537"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311230847/Monitoring+Migration">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311230847/Monitoring+Migration</a>)</u></p> |


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|       |                            | <h2 data-bbox="615 215 882 253">Config-on-the-Fly</h2> <div data-bbox="615 285 947 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read         </div> <h3 data-bbox="615 358 774 381">Table of Contents</h3> <ul data-bbox="615 407 1054 532" style="list-style-type: none"> <li>• <a href="#">Config-on-the-fly Files and Paths</a></li> <li>• <a href="#">Config-on-the-fly on Demand</a></li> <li>• <a href="#">Mapping NICs between Source and Destination</a></li> <li>• <a href="#">COTF Log</a></li> </ul> <hr data-bbox="615 568 1885 571"/> <p data-bbox="615 610 1885 735">Your container may contain configuration information from another system and this information may not be compatible with the current system. For example, you may need to change IP addresses or hostnames. You can use a Config-on-the-fly file (<i>StandardCOTF.xml</i>) to update the configuration information so that it works with the current system. You may need to update the settings in the configuration file with information from the current system.</p> <p data-bbox="615 760 1610 784">You specify the Config-on-the-fly file using the  <code>virtapedit</code> command-line utility to update the following property:</p> <div data-bbox="615 816 814 836" style="background-color: #f0f0f0; padding: 5px;"> <pre>1 CPROP_CONFIG_FILE</pre> </div> <p data-bbox="615 873 1640 898">Container properties (for example, <code>CPROP_SRC_NODENAME</code>) can be used as arguments to the <code>CPROP_CONFIG_FILE</code> property.</p> <p data-bbox="615 922 951 946">StandardCOTF.xml is located as follows:</p> <div data-bbox="615 979 1136 998" style="background-color: #f0f0f0; padding: 5px;"> <pre>1 C:\appliances\&lt;ContainerName&gt;\COTF\StandardCOTF.xml</pre> </div> <p data-bbox="615 1036 1808 1092">You can have multiple COTF files in the COTF folder. For example, one file could be for replacing IP addresses and another one for replacing hostnames. V-Migrate will load the combined COTF information from the files in the folder.</p> <h2 data-bbox="615 1154 1106 1192">Config-on-the-fly Files and Paths</h2> <p data-bbox="615 1211 1845 1235">When you specify a path to a COTF file, note that VirtaMove supports paths that are relative to the container folder. That is, VirtaMove supports:</p> <div data-bbox="615 1260 854 1279" style="background-color: #f0f0f0; padding: 5px;"> <pre>".\COTF\StandardCOTF.xml"</pre> </div> <p data-bbox="615 1308 825 1333">or the absolute full path:</p> <div data-bbox="615 1357 1087 1377" style="background-color: #f0f0f0; padding: 5px;"> <pre>"C:\appliance\ContainerName\COTF\StandardCOTF.xml"</pre> </div> |

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly</a>)</p> <h3>Creating a Config-on-the-Fly File</h3> <p>You can use a Config-on-the-fly file to define how specific file/registry items being tethered to on the source machine will be configured on the destination machine. For example, you may need to replace source machine identification information (hostname, IP address, etc.) with the destination machine ID information. You can use the Config-on-the-fly file to accomplish this task.</p> <p>You can specify the Config-on-the-fly file in the Admin Console by clicking the <code>COTF</code> button or using the following property with <code>virtapedit</code> command:</p> <pre>1 CPROP_CONFIG_FILE</pre> <p>You can:</p> <ul style="list-style-type: none"> <li>• specify the paths to be configured and the actions to be taken for the particular path</li> <li>• use container properties (for example, <code>CPROP_SRC_NODENAME</code>) as arguments when setting the <code>CPROP_CONFIG_FILE</code> property (for example, <code>virtapedit &lt;path_to_appliance&gt; CPROP_CONFIG_FILE "StandardCOTF.xml CPROP_SRC_NODENAME"</code>)</li> <li>• use wildcards in the <code>TARGET</code> tag and the <code>EXCLUDE</code> tag of the COTF file to exclude specific files from rehosting</li> </ul> <p>When you create a container, a Config-on-the-fly file is automatically created in the container's COTF folder:</p> <pre>1 COTF\StandardCOTF.xml</pre> <p>When you specify a path to be configured, VirtaMove supports paths that are relative to the container folder. That is, VirtaMove supports:</p> <pre>1 ".\COTF\StandardCOTF.xml"</pre> <p>or the absolute full path:</p> <pre>1 "C:\appliance\ContainerName\COTF\StandardCOTF.xml"</pre> <p>You can also specify only the file name of the COTF file if the file is in the <code>COTF</code> folder. For example:</p> <pre>1 "StandardCOTF.xml"</pre> <p>If a container requires a custom Config-on-the-fly file, copy the file into the <code>COTF</code> folder of the container before you compress and move the container. You can then manually update the <code>CPROP_CONFIG_FILE</code> after you uncompress the container to make sure that it is set to the current location of the custom Config-on-the-fly file.</p> |

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460208/Creating+a+Config-on-the-Fly+File">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460208/Creating+a+Config-on-the-Fly+File</a>)</p> <h3>Showing Custom Scripts When They Run</h3> <p>When you create a container, several scripts are created in the Container\Scripts folder as follows:</p> <pre>AfterDock.cmd AfterStart.cmd AfterStop.cmd AfterUndock.cmd BeforeDock.cmd BeforeStart.cmd BeforeStop.cmd BeforeUndock.cmd</pre> <p>Script files can be customized to execute commands, call other batch files, make configuration changes, or make modifications to the system environment to support the applications and services in the container.</p> <p>Do not rename script files.</p> <p>Custom scripts can be run before and after docking, starting and stopping container services, and undocking containers.</p> <p>For example, you can edit the BeforeDock.cmd script to add or remove a user or group from the container:</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Showing-Custom-Scripts-When-They-Run">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Showing-Custom-Scripts-When-They-Run</a>)</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p><b>Running Containers</b></p> <p>Once a container is docked and any required container services are started, you can run a container application.</p> <p><b>To Run a Container Using the Administrative Console</b></p> <ol style="list-style-type: none"> <li>1. Select a container and then click the <b>Dock</b> command button.</li> <li>2. If the container requires services to run, click the <b>Services</b> tab, and then start any required services that are not in a "Started" status.</li> <li>3. Click the <b>Run</b> button.</li> </ol> <p>Alternatively, you can right-click a docked container and select <b>Run Default App</b> if you want to start the default application for a container.</p> <p><b>To Run a Container Using the CLI</b></p> <p>At the command prompt, execute:</p> <pre>1 virtadock &lt;container&gt; 2 3 virtarun &lt;container&gt;</pre> <p>For example:</p> <pre>1 virtarun "D:\Appliances\notepad" "C:\Program Files\Windows\notepad.exe"</pre> <p>If you specify only the container, the container's startup application will run.</p> <p><b>Running Multiple Containers</b></p> <p>The  <b>virtarun</b> command uses shared memory, which allows VirtaMove to reduce the amount of memory needed when running multiple containers. For example, if you run 10 containers, this does not mean that 10 times the amount of memory is being used.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers</a>)</p> |

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|       |                            | <p><b>The Application Migration Process</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read</p> <p>Migrating an application involves the following steps:</p> <ol style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link.</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a>.</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</li> </ol> <p><b>Pre-Populate</b></p> <p>Pre-populating a container is part of the VirtaMove application migration process. Pre-population migrates remote products, services, users, and groups without requiring downtime of the application on the source server. Any locked files will not be copied over until the application is fully exercised.</p> <p>Pre-populate captures components of the application while the application is up and running on the source server. You can then schedule a maintenance window at a later time for the application. It is during this maintenance window that you would stop and shut down the application before you complete the migration by exercising the application.</p> <p>Pre-populate occurs when you click the <b>Pre-Populate</b> button in the VirtaMove Administrative Console under the <b>Tether</b> tab. A window displays the status of the Pre-Populate process.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</p> |

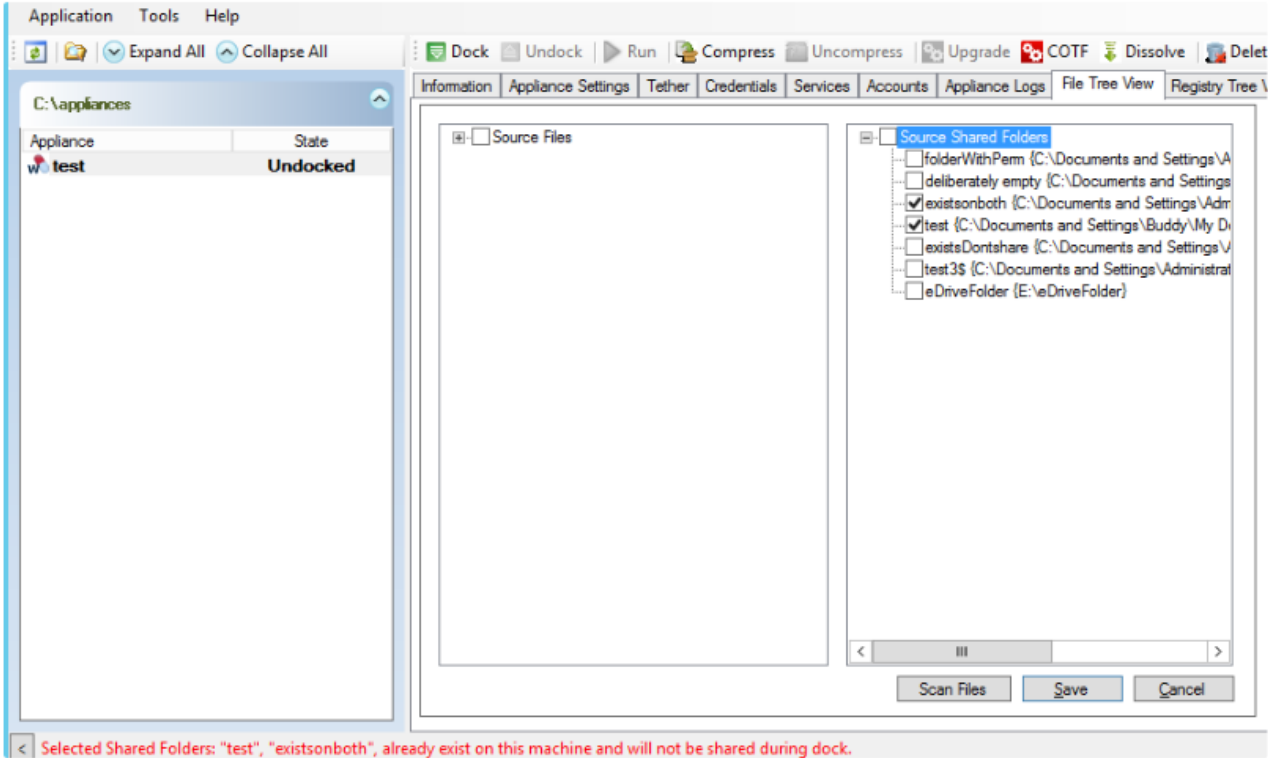
| Claim               | US 8,943,500<br>Claim Term  | Analysis   |                     |   |           |
|---------------------|---|--|---------------------|---|-----------|
|                     |   | <p>Starting Applications You Want to Monitor</p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 03, 2022 • 1 min read</p> <p>Once Source Monitor is enabled on the source machine, you can start the applications and services that are to be monitored. Source Monitor will track all the file system and registry paths accessed by these applications and services. The tracked paths are sent in real-time to the Source Agent, which in turn stores them in an SQLite database.</p> <p><b>Note:</b><br/>If the applications or services were already started before Monitor is enabled, you must restart them after Source Monitor is enabled.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329129/Starting+Applications+You+Want+to+Monitor">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329129/Starting+Applications+You+Want+to+Monitor</a>)</p>  |                     |   |           |
| 6                   | The system according to claim 5, wherein the interception database translates parameters and contexts between a host environment and the one or more isolated environments.                                       | <p>The Accused Products comprise a system as claimed in claim 5. <i>See</i> claim 5. The Accused Products comprise a system “wherein the interception database translates parameters and contexts between a host environment and the one or more isolated environments.”</p> <p>For example, “[t]he VirtaMove version that monitors the container properties and <i>system intercepts</i> to ensure the application runs smoothly, <i>just as it would if normally installed directly into the underlying operating system.</i>” This includes translating parameters and contexts between a host environment and the isolated environments.</p> <table border="1" data-bbox="615 1000 1904 1128"> <tr> <td data-bbox="615 1000 959 1128">CPROP_INTERCEPT_VER</td><td data-bbox="959 1000 1688 1128">The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system.</td><td data-bbox="1688 1000 1904 1128">Read-only</td></tr> </table> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314048600/Container+Properties</a>)</p> | CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only |
| CPROP_INTERCEPT_VER | The VirtaMove version that monitors the container properties and system intercepts to ensure the application runs smoothly, just as it would if normally installed directly into the underlying operating system. | Read-only  |                     |   |           |

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|       |                            | <p><b>Docking</b></p> <p>Docking a container integrates and prepares the container's environment as part of the underlying operating system so that the application is ready to run.</p> <p>When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p>VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed when docking fails:</p> <pre>Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers</a>)</p> <p><b>Dock Intercept</b></p> <p><b>This is a blocking issue.</b></p> <p>This section indicated whether the sanity test has passed or not on the destination machine. VirtaMove requires the ability to intercept system calls between the application and the operating system on the destination machine. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as antivirus software or group account permissions.</p> <p>The following error message may be displayed when Audit fails:</p> <pre>1 Failed to intercept OS calls. Sanity test failed. Cannot dock.</pre> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310804512/Understanding+Audit</a>)</p> |



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|       |                            | <h3 data-bbox="625 215 972 256">Mapping System Drives</h3> <div data-bbox="625 289 955 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read         </div> <p data-bbox="625 362 1791 418">VirtaMove supports the deployment of containers where the source and destination machines have different system drives. However, the destination machine must have a local drive assigned the same drive letter as the source machine's system drive.</p> <p data-bbox="625 443 1801 467">You can use the <code>virtavdrive</code> command to map the system drive from the source machine to a system drive on the destination machine.</p> <p data-bbox="625 492 735 516">For example:</p> <p data-bbox="625 540 724 565"><b>Scenario 1:</b></p> <p data-bbox="625 589 762 613">Source machine</p> <p data-bbox="625 621 751 646">Local Drives: C:</p> <p data-bbox="625 654 762 678">System Drive: C:</p> <p data-bbox="625 703 804 727">Destination machine</p> <p data-bbox="625 735 751 760">Local Drives: E:</p> <p data-bbox="625 768 762 792">System Drive: E:</p> <pre data-bbox="636 824 1108 849">1 virtavdrive c:\appliances\mycontainer move c e</pre> <p data-bbox="625 881 724 906"><b>Scenario 2:</b></p> <p data-bbox="625 930 762 954">Source machine</p> <p data-bbox="625 963 783 987">Local Drives: C, E:</p> <p data-bbox="625 995 762 1019">System Drive: E:</p> <p data-bbox="625 1044 804 1068">Destination machine</p> <p data-bbox="625 1076 783 1101">Local Drives: C, E:</p> <p data-bbox="625 1109 762 1133">System Drive: C:</p> <pre data-bbox="636 1166 1098 1190">1 virtavdrive c:\appliances\mycontainer move e c</pre> <p data-bbox="615 1263 1843 1295"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263679/Mapping+System+Drives">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263679/Mapping+System+Drives</a></p> |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <h3 data-bbox="619 224 1476 267">Mapping NICs between Source and Destination</h3> <p data-bbox="619 293 1896 402">You can use COTF to add or remove NICs to match the number of NICs on the source machine, using selected NICs as COTF parameters. For example, the source machine might have more NICs than the destination. The parameters are stored in the <code>ipCOTF.xml</code> file in the <code>COTF</code> folder for the selected appliance.</p> <p data-bbox="619 435 1976 500">If there is a NIC mismatch, the Administrative Console will display a message. You can map the IP addresses manually if you need to correct the mismatch.</p> <p data-bbox="619 548 1745 581"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly</a></p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <h3 data-bbox="621 215 1056 250">Conflicts and Shared Folders</h3> <p data-bbox="621 272 1890 331">When you select a shared folder, it's possible that it may conflict with a shared folder on the destination machine. In this case, a warning message will appear in the status bar at the bottom of the Administrative Console.</p>  <p>The screenshot shows the Administrative Console interface. On the left, a pane titled 'C:\appliances' contains a table with two columns: 'Appliance' and 'State'. The table has one row with 'test' in the 'Appliance' column and 'Undocked' in the 'State' column. The main area of the console is divided into two panes. The left pane is titled 'Source Files' and is empty. The right pane is titled 'Source Shared Folders' and contains a list of folders with checkboxes next to them. The folders are: 'folderWithPerm (C:\Documents and Settings\A...', 'deliberately empty (C:\Documents and Settings\Adm...', 'existsonboth (C:\Documents and Settings\Adm...', 'test (C:\Documents and Settings\Buddy\My D...', 'existsDontshare (C:\Documents and Settings\V...', 'test3\$ (C:\Documents and Settings\Administrat...', and 'eDriveFolder (E:\eDriveFolder)'. The 'existsonboth' and 'test' folders are checked. At the bottom of the console, a status bar displays a red warning message: 'Selected Shared Folders: "test", "existsonboth", already exist on this machine and will not be shared during dock.'</p> <p data-bbox="609 1170 1812 1203"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders</a></p> |

## Using Filters



Owned by Thomas Farley (Deactivated) \*\*\*  
Mar 02, 2022 • 1 min read

Use VirtaMove filters to exclude specific paths and registry files from a migration.

### You can do this:

- when you create a container
- during tether, or
- when you dissolve, to make sure that specific paths are not transferred to the underlying operating system; for example, to exclude VirtaMove executables


### Define filters by:


- editing `UserDefinedFilter` and adding nodes where appropriate, or
- creating filters based on the environments or applications you want to migrate


You create filters by adding a Custom filter entity to the `FilterList.xml` file and copying the custom filter into the `<Installation Directory>\Filters\Custom` folder. The syntax should follow existing filters.

### Filters

|   |  |
|---|--|
| <code>&lt;Installation Directory&gt;\Filters\VirtaMoveDissolveExcludes.xml</code> | Contains path and registry filters that will automatically be copied to every container that is created. Useful for excluding OS-dependent information from a migration.                                 |
| <code>&lt;Installation Directory&gt;\Filters\VirtaMoveFilter.xml</code>           | This filter excludes all VirtaMove-related products. Useful for excluding VirtaMove Source Agent files.  |
| <code>&lt;Installation Directory&gt;\Filters\FilterList.xml</code>                | Contains a list of all the filters in a container.   |
| <code>&lt;Installation Directory&gt;\Filters\Custom\DotNet.xml</code>             | A custom filter used to exclude .NET files and registry keys, so that they maintain their integrity on the underlying operating system.  |
| <code>&lt;Installation Directory&gt;\Filters\Custom\LogAndTempFilter.xml</code>   | A custom filter used to exclude all log and temporary files, which are usually huge and do not need to be migrated to the new server. Excluding these files speeds up the pre-populate and COTF process. |
| <code>&lt;Installation Directory&gt;\Filters\Custom\UserDefinedFilter.xml</code>  | Stores user-defined filters, which will automatically be used by all filters.  |

| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311066652/Using+Filters">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311066652/Using+Filters</a>)</p> <p><b>Dissolve and Shared Folders</b> </p> <p>During Dissolve, shared folders will be set up to their respective dissolved folder locations. A migrated shared folder will be set up during Dissolve only if the location of the associated directory is not being merged with an existing location.</p> <p>If a folder exists at the dissolve location before dissolving, the shared folder will not be set up.</p> <p>See <a href="#">Migrating Folders, Shared Folders, and Registries</a> for information about how to migrate shared folders.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329628/About+Shared+Folders</a>)</p> <p>11. Navigate to the <b>Services</b> tab at the top of the Administrative Console. Edit the User Name and Password for a service as appropriate. Note that you are setting a password only; VirtaMove does not validate a password against the original password associated with the source machine. You cannot edit passwords after you click <b>Dock</b>. Service User Names must be in the format domain\uid, where uid is the user identifier. This is a restriction of the Microsoft Win32 functions for working with the Service Control Manager (SCM), which is used by VirtaMove.</p> <ul style="list-style-type: none"> <li>◦ If you select a service and the service is "Started" on the source machine, tethering will not succeed. Stop the service before tethering by right-clicking the service and then selecting <b>Stop Source Service</b>.</li> <li>◦ If you select a service and the service already exists on the underlying operating system, the <b>Source Status</b> column will display "CONFLICT". Resolve the conflict and then press F5 to refresh the list.</li> </ul> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311132184/Migrating+an+Application+Using+the+VirtaMove+Administrative+Console">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311132184/Migrating+an+Application+Using+the+VirtaMove+Administrative+Console</a>)</p> |

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|       |                            | <p><b>Testing Containers</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</p> <p><b>Table of Contents</b></p> <ul style="list-style-type: none"> <li>• <a href="#">About Testing Containers</a> <ul style="list-style-type: none"> <li>◦ <a href="#">Testing Requirements</a></li> </ul> </li> <li>• <a href="#">Testing a Container</a></li> <li>• <a href="#">What If I Find Problems During Testing?</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Delete and Recreate a Container</a></li> </ul> </li> </ul> <p><b>About Testing Containers</b></p> <p>You can test a container to make sure that the appliance runs correctly. Testing a container may include testing container services, for example. Once you are satisfied that the container runs correctly, you can then move the appliance to the destination machine.</p> <p>You can test an appliance on either the source machine or the destination machine.</p> <p><b>Testing Requirements</b></p> <p>If you are testing on the destination machine, make sure that the environment is configured to meet the configuration requirements of the application or service in the appliance. For more information, see your application documentation for system configuration requirements.</p> <p>To avoid service conflicts where appliances with services from the source machine already exist on the destination, VirtaMove will display an error message and prevent the local service from starting. You must resolve this conflict by either removing the service from the destination or removing the service from the container.</p> <p><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers</a>)</u></p> |

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|       |                            | <h2 data-bbox="617 224 936 266">Using Tether Sync</h2> <div data-bbox="617 305 1022 358">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 4 min read         </div> <h3 data-bbox="617 399 812 423">Table of Contents</h3> <ul data-bbox="617 456 1031 686" style="list-style-type: none"> <li>• <a href="#">Update Mode</a></li> <li>• <a href="#">Reset Mode</a></li> <li>• <a href="#">What Gets Synced?</a> <ul style="list-style-type: none"> <li>◦ <a href="#">To Use Tether Sync</a></li> <li>◦ <a href="#">To Use Tether Sync Using the CLI</a></li> </ul> </li> <li>• <a href="#">Tether Synch Log</a></li> </ul> <hr data-bbox="617 727 1543 730"/> <p data-bbox="617 781 1507 1052">Tether Sync allows a container to be populated with files and registry keys and then updated later. The Tether Sync feature is useful if you are not able to move some files (e.g., locked databases) right away but instead, need to wait for a service window. In a case like this, Tether Sync allows you to tether as much at the source as possible in advance and then re-connect later during a service window in order to finish the migration. Any new or different files/keys will be re-copied from the source, and files/keys that have been removed from the source will also be removed.</p> <p data-bbox="617 1084 1503 1154">A container must be undocked to apply Tether Sync. An application will not start until the Tether Sync process is complete.</p> <p data-bbox="617 1187 856 1211">Tether Sync modes are:</p> <ul data-bbox="617 1243 730 1317" style="list-style-type: none"> <li>• <a href="#">Update</a></li> <li>• <a href="#">Reset</a></li> </ul> |

## Update Mode

Using Update Mode, any files or keys that are newest will be copied. If you changed a file on both the source and destination machines, the newest file will be copied. Changes that have been made to the destination machine may not be preserved in Update Mode. You should therefore keep track of changes that were made to the destination for re-hosting or other reasons because these changes may need to be repeated.

### Example Use:

An application has been tethered to a destination machine. Work has been performed on the destination machine, for example testing or re-configuration. Later, when you want to finalize the migration, you re-tether to the original production machine to get any files that have been updated or added. For example, a website installation to which changes have been made. In this case, you would use Update Mode to avoid losing modifications to the destination machine.

## Reset Mode

Using Reset Mode, any files or keys that are different between the source and destination machines will be overwritten. Changes that have been made to the container on the destination machine will not be preserved in Reset Mode. You should therefore keep track of changes that were made to the destination for re-hosting or other reasons because these changes will need to be repeated.

### Example Use:


An application has been migrated for user acceptance testing (UAT) and has been extensively exercised. It's possible that files have been modified, added, or removed during UAT and these changes are not wanted on the production server. In this case, Reset Mode would return the container to the original state it was in and copy any additional changes from the source machine.

### Caution:



VirtaMove does not recommend that you perform a Tether Sync in Reset Mode for an IIS application migration. This mode will undo all changes, including any modifications made by IIS migration scripts. IIS services may not start if you perform a Tether Sync in Reset Mode for an IIS application migration.



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|       |                            | <h3 data-bbox="617 215 968 261">What Gets Synced?</h3> <p data-bbox="617 285 1541 477">Tether Sync does not synchronize everything on the source machine to the destination machine. Only paths and keys that have previously been tethered will be checked against the source machine. Specifically, individual files that have been copied will be checked against the source machine as well as paths that were copied in entirety (greedy copied).</p> <p data-bbox="617 509 764 537"><b>For example:</b></p> <p data-bbox="617 570 1541 764">If you have a complete copy of "<code>\Program Files\SQL Server</code>" and you add directory "<code>\Program Files\SQL Server\some_folder</code>", then a sync operation will copy "<code>some_folder</code>" to the destination machine because the "<code>SQL Server</code>" folder was greedy copied. If you add "<code>\Program Files\some_other_folder</code>", it will not be copied because it is outside of the paths that were greedy copied.</p> <p data-bbox="617 797 1541 902">To see which paths will be synced, see the <code>tether_greedy_roots.dat</code> file in the container folder. This file contains a list of paths that are meant to be synchronized with the source.</p> <p data-bbox="617 967 1766 995"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329719/Using+Tether+Sync</a></p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><b>Migrating Scheduled Tasks</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 4 min read</p> <p>You can migrate scheduled tasks using the Administrative Console or the CLI using <code>virtatasks</code>.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If you want to migrate user-defined environment variables along with a scheduled task, select and migrate the user account on the <b>Source Accounts</b> tab.</li> <li>• Docking or dissolving a container installs a task to the underlying operating system. In doing so, VirtaMove maintains the folder structure that was on the source machine. For Windows Server 2008 and later sources, tasks can be nested under layers of folders. If these folders do not exist when a task is being installed, they will be created on the destination machine to store the task. Undocking the container removes the task from the underlying operating system. However, any folders that were created to store the task will not be removed.</li> </ul> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296093/Migrating+Scheduled+Tasks">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296093/Migrating+Scheduled+Tasks</a>)</p> <p><b>Locking or Unlocking a Container</b></p> <p>You can lock a selected container to make sure that it is not modified during the migration process. Modifications could result in the application not running correctly after the tether process. You can then unlock the container once you're done.</p> <p><b>To Lock a Container</b></p> <ol style="list-style-type: none"> <li>1. Select a container, and then select <b>Tools&gt;Lock/Unlock VAA</b>.</li> <li>2. Enter a password in the first field. Take note or remember this password for when you want to unlock the container.</li> <li>3. Confirm the password in the second field, then click <b>OK</b>.</li> </ol> <p><b>To Unlock a Container</b></p> <ol style="list-style-type: none"> <li>1. Select the locked container, and then select <b>Tools&gt;Lock/Unlock VAA</b>.</li> <li>2. Enter the password you created to lock the container, then click <b>OK</b>.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Locking-or-Unlocking-a-Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Locking-or-Unlocking-a-Container</a>)</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p data-bbox="621 224 1163 261"><b>What Happens if a File Isn't Copied?</b></p> <p data-bbox="621 282 1885 375">The tethering process will fail to copy a file or any file under a folder from the source machine if, for example, a file is locked on the source machine by a service or a running application or if the connection to the source machine is lost. If this occurs, the tethering process will not mark such a file as "COMPLETE" until the file is physically copied over from the source machine.</p> <p data-bbox="621 396 1881 456">If the application requests a file that was not successfully copied over previously, the tethering process will continue to try to copy the file from the source machine until the copy operation is successful.</p> <p data-bbox="609 501 1797 539"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311230847/Monitoring+Migration">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311230847/Monitoring+Migration</a>)</u></p> |

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|       |                            | <h2 data-bbox="615 215 882 253">Config-on-the-Fly</h2> <div data-bbox="615 285 947 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read         </div> <h3 data-bbox="615 358 774 380">Table of Contents</h3> <ul data-bbox="615 407 1054 532" style="list-style-type: none"> <li>• <a href="#">Config-on-the-fly Files and Paths</a></li> <li>• <a href="#">Config-on-the-fly on Demand</a></li> <li>• <a href="#">Mapping NICs between Source and Destination</a></li> <li>• <a href="#">COTF Log</a></li> </ul> <hr data-bbox="615 570 1885 574"/> <p data-bbox="615 610 1885 735">Your container may contain configuration information from another system and this information may not be compatible with the current system. For example, you may need to change IP addresses or hostnames. You can use a Config-on-the-fly file (<i>StandardCOTF.xml</i>) to update the configuration information so that it works with the current system. You may need to update the settings in the configuration file with information from the current system.</p> <p data-bbox="615 760 1610 784">You specify the Config-on-the-fly file using the  <code>virtapedit</code> command-line utility to update the following property:</p> <div data-bbox="615 816 814 837" style="background-color: #f0f0f0; padding: 5px;"> <pre>1 CPROP_CONFIG_FILE</pre> </div> <p data-bbox="615 873 1640 898">Container properties (for example, <code>CPROP_SRC_NODENAME</code>) can be used as arguments to the <code>CPROP_CONFIG_FILE</code> property.</p> <p data-bbox="615 922 951 946">StandardCOTF.xml is located as follows:</p> <div data-bbox="615 979 1136 1000" style="background-color: #f0f0f0; padding: 5px;"> <pre>1 C:\appliances\&lt;ContainerName&gt;\COTF\StandardCOTF.xml</pre> </div> <p data-bbox="615 1036 1808 1092">You can have multiple COTF files in the COTF folder. For example, one file could be for replacing IP addresses and another one for replacing hostnames. V-Migrate will load the combined COTF information from the files in the folder.</p> <h2 data-bbox="615 1154 1106 1192">Config-on-the-fly Files and Paths</h2> <p data-bbox="615 1211 1845 1235">When you specify a path to a COTF file, note that VirtaMove supports paths that are relative to the container folder. That is, VirtaMove supports:</p> <div data-bbox="615 1260 854 1281" style="background-color: #f0f0f0; padding: 5px;"> <pre>".\COTF\StandardCOTF.xml"</pre> </div> <p data-bbox="615 1308 825 1333">or the absolute full path:</p> <div data-bbox="615 1357 1087 1378" style="background-color: #f0f0f0; padding: 5px;"> <pre>"C:\appliance\ContainerName\COTF\StandardCOTF.xml"</pre> </div> |

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263613/Config-on-the-Fly</a>)</p> <h3>Creating a Config-on-the-Fly File</h3> <p>You can use a Config-on-the-fly file to define how specific file/registry items being tethered to on the source machine will be configured on the destination machine. For example, you may need to replace source machine identification information (hostname, IP address, etc.) with the destination machine ID information. You can use the Config-on-the-fly file to accomplish this task.</p> <p>You can specify the Config-on-the-fly file in the Admin Console by clicking the <code>COTF</code> button or using the following property with <code>virtapedit</code> command:</p> <pre>1 CPROP_CONFIG_FILE</pre> <p>You can:</p> <ul style="list-style-type: none"> <li>• specify the paths to be configured and the actions to be taken for the particular path</li> <li>• use container properties (for example, <code>CPROP_SRC_NODENAME</code>) as arguments when setting the <code>CPROP_CONFIG_FILE</code> property (for example, <code>virtapedit &lt;path_to_appliance&gt; CPROP_CONFIG_FILE "StandardCOTF.xml CPROP_SRC_NODENAME"</code>)</li> <li>• use wildcards in the <code>TARGET</code> tag and the <code>EXCLUDE</code> tag of the COTF file to exclude specific files from rehosting</li> </ul> <p>When you create a container, a Config-on-the-fly file is automatically created in the container's COTF folder:</p> <pre>1 COTF\StandardCOTF.xml</pre> <p>When you specify a path to be configured, VirtaMove supports paths that are relative to the container folder. That is, VirtaMove supports:</p> <pre>1 ".\COTF\StandardCOTF.xml"</pre> <p>or the absolute full path:</p> <pre>1 "C:\appliance\ContainerName\COTF\StandardCOTF.xml"</pre> <p>You can also specify only the file name of the COTF file if the file is in the <code>COTF</code> folder. For example:</p> <pre>1 "StandardCOTF.xml"</pre> <p>If a container requires a custom Config-on-the-fly file, copy the file into the <code>COTF</code> folder of the container before you compress and move the container. You can then manually update the <code>CPROP_CONFIG_FILE</code> after you uncompress the container to make sure that it is set to the current location of the custom Config-on-the-fly file.</p> |

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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460208/Creating+a+Config-on-the-Fly+File">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311460208/Creating+a+Config-on-the-Fly+File</a>)</p> <h3>Showing Custom Scripts When They Run</h3> <p>When you create a container, several scripts are created in the Container\Scripts folder as follows:</p> <p>AfterDock.cmd</p> <p>AfterStart.cmd</p> <p>AfterStop.cmd</p> <p>AfterUndock.cmd</p> <p>BeforeDock.cmd</p> <p>BeforeStart.cmd</p> <p>BeforeStop.cmd</p> <p>BeforeUndock.cmd</p> <p>Script files can be customized to execute commands, call other batch files, make configuration changes, or make modifications to the system environment to support the applications and services in the container.</p> <p>Do not rename script files.</p> <p>Custom scripts can be run before and after docking, starting and stopping container services, and undocking containers.</p> <p>For example, you can edit the BeforeDock.cmd script to add or remove a user or group from the container:</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Showing-Custom-Scripts-When-They-Run">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311263823/Managing+Container+Settings#Showing-Custom-Scripts-When-They-Run</a>)</p> |




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|       |                            | <p><b>Running Containers</b></p> <p>Once a container is docked and any required container services are started, you can run a container application.</p> <p><b>To Run a Container Using the Administrative Console</b></p> <ol style="list-style-type: none"> <li>1. Select a container and then click the <b>Dock</b> command button.</li> <li>2. If the container requires services to run, click the <b>Services</b> tab, and then start any required services that are not in a "Started" status.</li> <li>3. Click the <b>Run</b> button.</li> </ol> <p>Alternatively, you can right-click a docked container and select <b>Run Default App</b> if you want to start the default application for a container.</p> <p><b>To Run a Container Using the CLI</b></p> <p>At the command prompt, execute:</p> <pre>1 virtadock &lt;container&gt; 2 3 virtarun &lt;container&gt;</pre> <p>For example:</p> <pre>1 virtarun "D:\Appliances\notepad" "C:\Program Files\Windows\notepad.exe"</pre> <p>If you specify only the container, the container's startup application will run.</p> <p><b>Running Multiple Containers</b></p> <p>The <code>virtarun</code> command uses shared memory, which allows VirtaMove to reduce the amount of memory needed when running multiple containers. For example, if you run 10 containers, this does not mean that 10 times the amount of memory is being used.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers</a>)</p> |


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|       |                            | <p data-bbox="617 215 1129 253"><b>The Application Migration Process</b></p> <div data-bbox="617 285 953 331">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read         </div> <p data-bbox="617 360 1077 384">Migrating an application involves the following steps:</p> <ol data-bbox="617 406 1890 727" style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link.</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a>.</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</li> </ol> <p data-bbox="617 787 814 824"><b>Pre-Populate</b></p> <p data-bbox="617 846 1858 935">Pre-populating a container is part of the VirtaMove application migration process. Pre-population migrates remote products, services, users, and groups without requiring downtime of the application on the source server. Any locked files will not be copied over until the application is fully exercised.</p> <p data-bbox="617 961 1858 1050">Pre-populate captures components of the application while the application is up and running on the source server. You can then schedule a maintenance window at a later time for the application. It is during this maintenance window that you would stop and shut down the application before you complete the migration by exercising the application.</p> <p data-bbox="617 1076 1883 1133">Pre-populate occurs when you click the <b>Pre-Populate</b> button in the VirtaMove Administrative Console under the <b>Tether</b> tab. A window displays the status of the Pre-Populate process.</p> <p data-bbox="617 1177 1980 1247"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</u></p> |



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|-------------|--|--|--------|-------------|----|--|-----------|---------------------------------|-------------|--|-----------|--------------------------------------|----|--|
|             |  | <div><h3>Starting Applications You Want to Monitor</h3><div><div>TF</div><div>Owned by Thomas Farley (Deactivated) ***<br/>Mar 03, 2022 • 1 min read</div></div><p>Once Source Monitor is enabled on the source machine, you can start the applications and services that are to be monitored. Source Monitor will track all the file system and registry paths accessed by these applications and services. The tracked paths are sent in real-time to the Source Agent, which in turn stores them in an SQLite database.</p><p><b>Note:</b></p><p>If the applications or services were already started before Monitor is enabled, you must restart them after Source Monitor is enabled.</p><p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329129/Starting+Applications+You+Want+to+Monitor">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311329129/Starting+Applications+You+Want+to+Monitor</a>)</p><h3>virtarun</h3><div><div>TF</div><div>Owned by Thomas Farley (Deactivated) ***<br/>Mar 24, 2022 • 1 min read</div></div><p>This command runs a container application. Administrator privileges are not required.</p><p><b>Syntax</b></p><pre>1 virtarun [/S] [/C &lt;path&gt;] Appliance ["application"]["arguments"]</pre><p><b>Options</b></p><table><tr><th>Option</th><th>Description</th></tr><tr><td>/S</td><td>Silent mode. Suppresses dialog box pop-up warning/errors so that batch scripts don't fail.</td></tr><tr><td>Appliance</td><td>The full path of the container.</td></tr><tr><td>application</td><td>The full path of the application to run. If an application is not specified, the application specified in the Startup property will run.</td></tr><tr><td>arguments</td><td>Argument parameters for application.</td></tr><tr><td>/C</td><td>Change to a new working directory at launch.</td></tr></table></div> | Option | Description | /S | Silent mode. Suppresses dialog box pop-up warning/errors so that batch scripts don't fail. | Appliance | The full path of the container. | application | The full path of the application to run. If an application is not specified, the application specified in the Startup property will run. | arguments | Argument parameters for application. | /C | Change to a new working directory at launch. |
| Option      | Description  |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |
| /S          | Silent mode. Suppresses dialog box pop-up warning/errors so that batch scripts don't fail.   |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |
| Appliance   | The full path of the container.  |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |
| application | The full path of the application to run. If an application is not specified, the application specified in the Startup property will run. |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |
| arguments   | Argument parameters for application.   |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |
| /C          | Change to a new working directory at launch.   |  |        |             |    |  |           |                                 |             |  |           |                                      |    |  |

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|       |   | (https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212693/virtarun)   |
| 7     | The system according to claim 1, wherein the one or more isolated environments are stored on a local storage. | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein the one or more isolated environments are stored on a local storage.”</p> <p>Once containers are migrated onto the destination machine, the Accused Products perform “docking,” which “integrates and prepare the container’s environment as <i>part of the underlying operating system</i> so that the application is ready to run. When you dock a container, <i>it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</i>”</p> <p><b>Docking</b></p> <p>Docking a container integrates and prepares the container’s environment as part of the underlying operating system so that the application is ready to run.</p> <p>When you dock a container, it is registered with VirtaMove and any system definitions that were defined for the container when it was created. System definitions include file associations; in some cases, a file may need to be copied to the operating system.</p> <p>VirtaMove runs a basic sanity test on a container when you attempt to dock the container. Certain conditions on an operating system may interfere with VirtaMove software and an attempt to dock a container, such as an antivirus software or group account permissions. In such a case, the following error message may be displayed when docking fails:</p> <p>Failed to intercept OS calls. Sanity test failed. Cannot dock.</p> <p>(https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311296481/Docking+and+Undocking+Containers)</p> <p>Indeed, storage capacity on the destination machine is a relevant consideration when migrating application containers.</p> |

| Claim   | US 8,943,500<br>Claim Term   | Analysis  |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
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|   |  | <div><p>The following table lists the elements in the Destination Details window.</p><table><tr><th>Item</th><th>Description</th></tr><tr><td>Destination System Information card</td><td>Displays information about the system of the destination:<ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• CPU</li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul></td></tr><tr><td>Storage Profile card</td><td>Displays the number of system disks and storage disks, and the amount of free disk space. Click the toggle icon in the top right of the panel to change the view.</td></tr><tr><td>Migrations Complete card</td><td>Displays the number of applications migrated to this destination.</td></tr><tr><td>Migrations In-Progress card</td><td>Displays the number of migrations that are in progress for this destination, and the last operation.</td></tr><tr><td>Required Storage Profile to Dissolve VAA card</td><td>Displays the storage that is required to dissolve the container, if this information is available.</td></tr><tr><td>Filter</td><td>Lets you filter the list of destinations by OS, assigned group, or IP/hostname.</td></tr><tr><td></td><td>These icons let you perform tasks for the destination. From left to right:<ul style="list-style-type: none"><li>• View services on the destination</li><li>• View user and group accounts associated with the destination</li><li>• View patches applied to the destination</li></ul></td></tr></table></div> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314868022/Viewing+Destination+Details">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314868022/Viewing+Destination+Details</a>)</p> | Item | Description | Destination System Information card | Displays information about the system of the destination: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• CPU</li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul> | Storage Profile card | Displays the number of system disks and storage disks, and the amount of free disk space. Click the toggle icon in the top right of the panel to change the view. | Migrations Complete card | Displays the number of applications migrated to this destination. | Migrations In-Progress card | Displays the number of migrations that are in progress for this destination, and the last operation. | Required Storage Profile to Dissolve VAA card | Displays the storage that is required to dissolve the container, if this information is available. | Filter | Lets you filter the list of destinations by OS, assigned group, or IP/hostname. |  | These icons let you perform tasks for the destination. From left to right: <ul style="list-style-type: none"><li>• View services on the destination</li><li>• View user and group accounts associated with the destination</li><li>• View patches applied to the destination</li></ul> |
| Item  | Description  |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Destination System Information card   | Displays information about the system of the destination: <ul style="list-style-type: none"><li>• IP Address</li><li>• OS</li><li>• Any group assigned to the source</li><li>• CPU</li><li>• Source. You can assign a destination to a source by clicking Assign.</li><li>• Memory</li></ul> |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Storage Profile card  | Displays the number of system disks and storage disks, and the amount of free disk space. Click the toggle icon in the top right of the panel to change the view.  |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Migrations Complete card  | Displays the number of applications migrated to this destination.  |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Migrations In-Progress card   | Displays the number of migrations that are in progress for this destination, and the last operation.   |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Required Storage Profile to Dissolve VAA card                                     | Displays the storage that is required to dissolve the container, if this information is available.   |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
| Filter  | Lets you filter the list of destinations by OS, assigned group, or IP/hostname.  |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |
|  | These icons let you perform tasks for the destination. From left to right: <ul style="list-style-type: none"><li>• View services on the destination</li><li>• View user and group accounts associated with the destination</li><li>• View patches applied to the destination</li></ul>       |   |      |             |                                     |  |                      |   |                          |   |                             |  |   |  |        |   |   |  |

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|       |                            | <p data-bbox="632 224 1121 256">Discovering Capacity Requirements</p> <div data-bbox="632 289 945 329">  Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read         </div> <p data-bbox="632 362 1869 410">The Capacity Requirements window displays a summary of capacity information for discovered sources so you can plan appropriately for capacity required on destination servers.</p> <p data-bbox="632 438 1331 459">Click <b>Discover&gt;Capacity Requirements</b>. The Capacity Requirements page is displayed.</p> <p data-bbox="632 483 1881 535">To view recommended sizing options for a dissolve-ready migration to the destination, click the plus icon for a selected source. To hide the options, click the icon again.</p> <p data-bbox="609 589 1980 654">( <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671412/Discovering+Capacity+Requirements">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671412/Discovering+Capacity+Requirements</a> )</p> <p data-bbox="609 695 1965 906">Once applications are containerized using VirtaMove, “<b><i>backup copies of the containerized applications can be stored for recovery or distribution purposes.</i></b>” VirtaMove stores backup copies of containerized applications, essentially copying the isolated environments to storage. This capability ensures that entire application environments, once isolated and containerized, can be replicated and stored for purposes like recovery, packaging or distribution. If containers—or containerized applications—are no longer required, they may be uninstalled—or deleted, as demonstrated above.</p> |

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|       |                            | <div data-bbox="611 207 1906 1167"><h2 data-bbox="795 224 1743 354">Using VirtaMove to Solve Datacenter Management Problems</h2><p data-bbox="1142 386 1392 406">by VALERIE YATES   May 01, 2018</p><p data-bbox="651 479 1824 539">For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges in the datacenter management sphere.</p><h3 data-bbox="651 565 963 584">1. ISOLATE APPLICATIONS</h3><p data-bbox="651 605 1860 738">In industries like Insurance, Healthcare, Pharma, and Banking, customers must verify compliance to rigorous, auditable standards. Once an app is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy apps and run them in isolation on new OS and servers. Containerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server.</p><h3 data-bbox="651 766 1375 786">2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3><p data-bbox="651 807 1860 902">If apps are <b>containerized</b>, it's easy to create exact images on new OSs such as Windows Server WS2012, WS2016, or WS2019. This eliminates the need to worry about recreating an installation process. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and cloud servers.</p><h3 data-bbox="651 930 1425 950">3. STORE MASTER COPIES OF APPLICATIONS FOR DISTRIBUTION</h3><p data-bbox="651 971 1852 1066">Once apps are containerized using VirtaMove, backup copies of the containerized apps can be stored for recovery, packaging, or distribution purposes. The master copy of an app stored in a container can be used to create a fresh, decluttered installation of an app, free of malware or other exposures.</p><p data-bbox="651 1104 1253 1123"><b>Read the Blog: VirtaMove – It's Not Just Application Modernization</b></p></div> <p data-bbox="611 1203 1505 1235"><a href="https://virtamove.com/blog/solve-datacenter-management-problems/">(https://virtamove.com/blog/solve-datacenter-management-problems/)</a></p> |


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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p><b>4. CREATE IDENTICAL APPLICATION IMAGES FOR TEST, DEVELOPMENT, OR BACKUP</b></p> <p><i>The problem:</i> Software development is a demanding business. Under pressure to meet deadlines, software developers might forget about the detailed installation scripts and configuration data required to create identical Cloud or Test copies of an application. Having identical Test and Development environments ensures that you've synchronized and are testing the current development version of software. Where identical development environments are not available, you're likely to see frequent problems with version and feature regression. Having a backup copy of both Development and Production instances is also critical for business continuity.</p> <p><i>The VirtaMove solution:</i> VirtaMove containerizes applications. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and Cloud servers, on newer OSs such as Windows Server 2008 R2 , WS2012, or WS2016. This eliminates the need to worry about recreating an installation process or scripts. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p>Using VirtaMove, applications containerized on WS2008 can run seamlessly on WS2012 or WS2016. Once applications are containerized, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, uncluttered installation of an application, free of malware or other exposures.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |   | <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p><b>3. STORE MASTER COPIES OF APPLICATIONS FOR RECOVERY PURPOSES</b></p> <p>Once applications are containerized using VirtaMove, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, decluttered installation of an application, free of malware or other exposures.</p> <p><i>Isolate, replicate, and recover or distribute.</i> These are just three of the many benefits and uses of VirtaMove containers, which customers rely on every day. To learn more about other use cases or how VirtaMove can help accelerate and modernize your Windows Server infrastructure, please call or e-mail us.</p> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> |
| 8     | The system according to claim 1, wherein the one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network. | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein one or more isolated environments are stored on a networked storage and the one or more applications are delivered over a network.”</p> <p>For example, the Accused Products able to transfer container files (“CAP files”) to a Cloud environment.</p>   |


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|       |                            | <p data-bbox="625 212 926 261"><b>Step 3: Moving</b></p> <p data-bbox="625 293 1866 391">Now it's time to move the app workload to a new Cloud VM. Start with a walkthrough of the app with the user and the migration team to ensure a shared understanding of how the app works at a basic level. The migration team will use this basic functionality to do initial testing of the onboarded app.</p> <p data-bbox="625 428 1850 565">Next, consider the network or pipe between the source server and Cloud environment. If you're moving a large workload, volume may cause significant network latency. One way to work around this problem is to do a staged migration, where you complete the operating upgrade on a locally provisioned modern server on the same network as the source system. You can then use physical and file transfers to move the upgraded workload to the Cloud.</p> <p data-bbox="625 597 1736 623">For high volume, large-scale onboarding projects, you'll need to develop a repeatable approach to address network latency.</p> <p data-bbox="625 659 1184 685">Using VirtaMove tools, moving could look something like this:</p> <ol data-bbox="625 717 1856 927" style="list-style-type: none"><li>1. You might complete the VirtaMove migration on a local destination server.</li><li>2. Compress the container. This generates a CAP file, which is a compressed version of the container with all the application(s), data, and configurations.</li><li>3. Transfer the CAP file to the hosted Cloud environment.</li><li>4. Using the VirtaMove Administration Console, uncompress the CAP file. This ensures that the container is functioning.</li></ol> <p data-bbox="611 1000 1669 1032"><u>(<a href="https://virtamove.com/blog/cloud-onboarding-with-virtamove-7-steps-to-success/">https://virtamove.com/blog/cloud-onboarding-with-virtamove-7-steps-to-success/</a>)</u></p> <p data-bbox="611 1068 1845 1133">Storing of containers may occur either on “modern in-house servers <i>or on hybrid or public cloud environments.</i>”</p> |


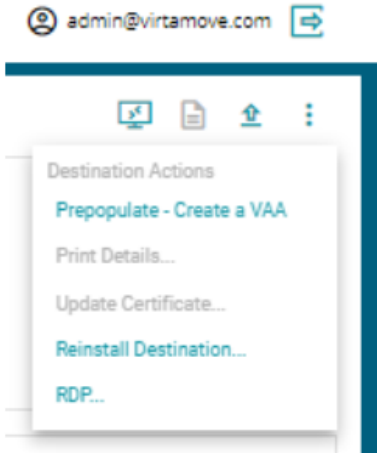



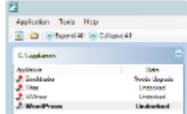

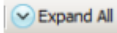
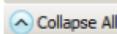
| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p>The new release of VirtaMove's award-winning application migration products V-Maestro, V-Monitor, and V-Migrate, moves your infrastructure forward with a stateful re-install of legacy server applications from WS2003, WS2008, WS2012, and WS2016 Server to new WS2019 servers (and within current Microsoft limitations, to Windows Containers on 2019). V-Migrate software automatically moves Windows-based applications from older to newer operating systems, on modern in-house servers or on hybrid or public cloud environments, including Microsoft Azure and Amazon AWS clouds.</p> <p><u>(<a href="https://www.prweb.com/releases/virtamove-v-migrate-now-supports-ws2019-and-windows-container-migrations-897804768.html">https://www.prweb.com/releases/virtamove-v-migrate-now-supports-ws2019-and-windows-container-migrations-897804768.html</a>)</u></p> <p><i>“When using VirtaMove to migrate applications to the Cloud or to migrate applications off-premises, network latency can greatly increase the time it takes to copy files and perform registry changes.”</i></p> |



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|       |                            | <h3 data-bbox="621 220 1079 256">Network Latency and Migrations</h3> <div data-bbox="621 289 938 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 4 min read         </div> <p data-bbox="621 358 1892 444">When using VirtaMove to migrate applications to the Cloud or to migrate applications off-premises, network latency can greatly increase the time it takes to copy files and perform registry changes. Roundtrip latency mainly impacts Windows Remote Registry Protocol (MS-RRP), which is used to manipulate the Windows registry on the destination machine.</p> <p data-bbox="621 467 1881 651">If your scenario involves migrating applications on-premise to the Cloud or off-premises, and you are not sure about network latency between the source and destination machines, VirtaMove recommends that you test migration using a simple, small application, such as Notepad++. Notepad++ is 17 MB on disk and should take no more than 5 minutes to migrate from the source to the destination environment. If the migration takes longer than 5 minutes, you can be reasonably sure that there is latency somewhere in the network. Testing a simple, small application like Notepad++ in your environment will identify potential latency and allow you to determine approximately how long larger applications will take to migrate. It's important to set clear expectations concerning how long a migration is expected to take, for the sake of resource planning and coverage during the change management window.</p> <p data-bbox="621 673 1892 824">If latency is a known constraint in your environment, VirtaMove recommends that you use an <a href="#">interim server</a> in a migration. Using an interim server provides the best strategy for migrating applications across high latency connections using VirtaMove. The interim server is provisioned with the operating system version of the intended destination machine, and placed in close proximity to the source server. The VirtaMove Tether and migration processes happen from the source server to the interim server. Then, the container is compressed and copied to the destination server off-premises. Once the compressed container has been copied successfully, it is uncompressed and finally dissolved onto the destination server, thus completing the migration.</p> <p data-bbox="621 878 1965 911"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310707083/Network+Latency+and+Migrations">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310707083/Network+Latency+and+Migrations</a>)</u></p> |


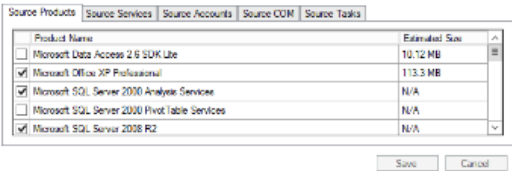
| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <div data-bbox="646 245 1864 670"> <p>The diagram illustrates the migration process using an interim server. It is divided into two main sections: 'Source Enviroment' and 'Off-Prem / Cloud Enviroment'. In the 'Source Enviroment', there is a 'Source Machine' (Windows Server 2003) and an 'Interim Machine' (Windows Server 2012). The process flow is as follows: 1. 'Discover' from Source Machine to Interim Machine. 2. 'Extract' from Source Machine to a 'VAA' (Virtual Application Archive) file. 3. 'Copy &amp; Run' from the VAA file to the Interim Machine. 4. 'Dissolve &amp; Install' from the Interim Machine back to the VAA file. 5. The final output is a 'Compressed VAA' file. This file is then transferred via 'FTP' to the 'Off-Prem / Cloud Enviroment', where it is installed on a 'DestinationMachine' (VirtaMove). The 'Off-Prem / Cloud Enviroment' is represented by a cloud icon.</p> </div> <p data-bbox="674 688 1199 719"><i>Migration Process using an Interim Server</i></p> <p data-bbox="625 764 1871 849">Performing migrations using an interim server ensures that files and registry artifacts are copied with minimal latency; this saves a great deal of time during the pre-populate part of the migration and when you exercise the tethered application. Moving one larger file (a compressed container stored as a .cap file) is the optimal way to move the contained application(s).</p> <p data-bbox="611 914 1965 946"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310707083/Network+Latency+and+Migrations">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310707083/Network+Latency+and+Migrations</a></p> |

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|       |   | <p><i>The VirtaMove solution:</i> Let's say that you want to move WS2000 or WS2003 applications to a private or public Cloud, but applications are currently running in a VM. You can incur the overhead of moving an exact image of a VM to the Cloud; however, the VM will be burdened with an outdated OS and new Cloud tools will not be available to you.</p> <p>The better approach? Move legacy applications to a native Cloud-supported OS like WS2008, WS2012, or WS2016 <i>as you do the Cloud migration</i>. This is called a staging approach to migration. Staging offers significant benefits:</p> <ul style="list-style-type: none"> <li>❑ The application (whether standalone or tiered) can be tested/verified on a staging server before deploying it to the Cloud.</li> <li>❑ The staging server can act as a cloned Test or Development environment.</li> <li>❑ Updating the OS during Cloud onboarding closes security exposures. Via an intelligent agent, VirtaMove compresses and encrypts data transfer, which means faster and secure transfer for your data and application.</li> </ul> <p>Cloud onboarding allows for automated OS maintenance, provides the processing advantages of a clean install, and unlocks Cloud tools for managing and monitoring application performance.</p> <p>VirtaMove automates the migration of legacy applications to the public, private, or hybrid Cloud environment of your choice. If you need to change it up later, you can simply automate the migration of applications back to datacenter servers or to another Cloud environment, which means that you're never locked into a Cloud, VM, or OS version.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |
| 9     | The system according to claim 1, wherein each of the one or more applications is installed into its own isolated environment. | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein each of the one or more applications is installed into its own isolated environment.”</p> <p>For example, through the Accused Products, multiple containers, each housing specific applications, may be created as part of the application migration process.</p> <p><b>Running Multiple Containers</b></p> <p>The  <code>virtarun</code> command uses shared memory, which allows VirtaMove to reduce the amount of memory needed when running multiple containers. For example, if you run 10 containers, this does not mean that 10 times the amount of memory is being used.</p>   |


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|       |                            | <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers</a>)</p> <p>Step 2: Prepopulate a Container</p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Once the pre-migration Audit is complete, you can create a migration container and populate it with the application and its dependencies. V-Maestro will copy all dependencies into the container, such as user and group accounts and COM objects. Once this step is complete, V-Maestro will dock the container, which registers the container onto the operating system of the destination.</p> <p>To Create and Prepopulate a Container</p> <p>1. In the Destination Details window, click the Actions icon at the top and select <b>Prepopulate - Create a VAA</b>.</p>  <p>2. Click <b>Continue</b> to confirm. You can check <b>Current Operation</b> in the <b>Migrations in-Progress</b> card to see the status of the prepopulation process.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container</a>)</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <h3 data-bbox="627 224 905 256">Viewing Containers</h3> <div data-bbox="627 289 951 329">  Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Sept 02, 2022 • 3 min read         </div> <p data-bbox="627 362 1892 410">You can view a list of containers and creation information for a container. View the list of containers displayed in the left side of the Administrative Console window.</p>  <p data-bbox="627 597 1092 621">You can use the following commands to manage the list:</p> <ul data-bbox="632 643 783 662" style="list-style-type: none"> <li>Refresh the list</li> </ul>  <ul data-bbox="632 816 1087 836" style="list-style-type: none"> <li>Expand or collapse the container locations in the list.</li> </ul> <div data-bbox="657 846 772 911">   </div> <p data-bbox="627 935 1883 984">You can view information about the environment in which a container was created, such as the operating system and the VirtaMove software version. You can also view information about docked hosts.</p> <p data-bbox="627 1011 1476 1036">You can add or remove container locations in the view list, and change the default folder for containers.</p> <p data-bbox="627 1060 680 1079"><b>Note:</b></p> <p data-bbox="627 1092 1869 1141">Containers are not deleted from the source machine when you remove a container location from the list. For information about deleting containers, see <a href="#">Deleting Containers</a>.</p> <p data-bbox="609 1203 1776 1235"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311231096/Viewing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311231096/Viewing+Containers</a>)</u></p> <p data-bbox="609 1271 1969 1344">The Accused Products discover and monitor multiple sources and applications. Each application and their components and dependencies may be pre-populated into their own distinct containers.</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p><b>About Monitoring Applications</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Monitoring discovered sources and the applications they are running lets you collect data about how and when these applications are used, in real time. It also discovers application components and dependencies that you might not be aware of, and how application components might be distributed across a network. Monitoring reduces the amount of time required to exercise the application on the destination, which therefore minimizes the duration of the maintenance window.</p> <p>After monitoring selected applications for a few days, you can decide how best to move them to selected destinations, or whether to even move them at all if they don't appear to be a priority for migration based on usage data. For example, applications with a monitoring status of No Usage may not be usefully moved.</p> <p><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications</a></p> <p><b>Updating the VirtaMove Activation Code</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 03, 2022 • 1 min read</p> <p>You can update the activation code for your VirtaMove license in the Administrative Console.</p> <p>After you update the activation code, any subsequent containers connecting to the source machine associated with the activation code will not be prompted for activation. Connections to new source machines will use the default activation code.</p> <p><b>Important:</b></p> <p>Changing the default activation code will change the activation code for ALL containers. If you have multiple containers and you update the activation code, existing and new containers will now use the new activation code. This scenario might result in containers using an extra license allotment.</p> <p><b>To Update the Activation Code</b></p> <ol style="list-style-type: none"> <li>1. Open the VirtaMove Administrative Console.</li> <li>2. Select <b>Tools&gt;Set Activation Code</b>. The Update Activation Codes window appears.</li> <li>3. Enter the <b>Activation Code</b>, and then click <b>Apply</b>.</li> <li>4. Click <b>Done</b>.</li> </ol> <p><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394720/Updating+the+VirtaMove+Activation+Code">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394720/Updating+the+VirtaMove+Activation+Code</a></p> |

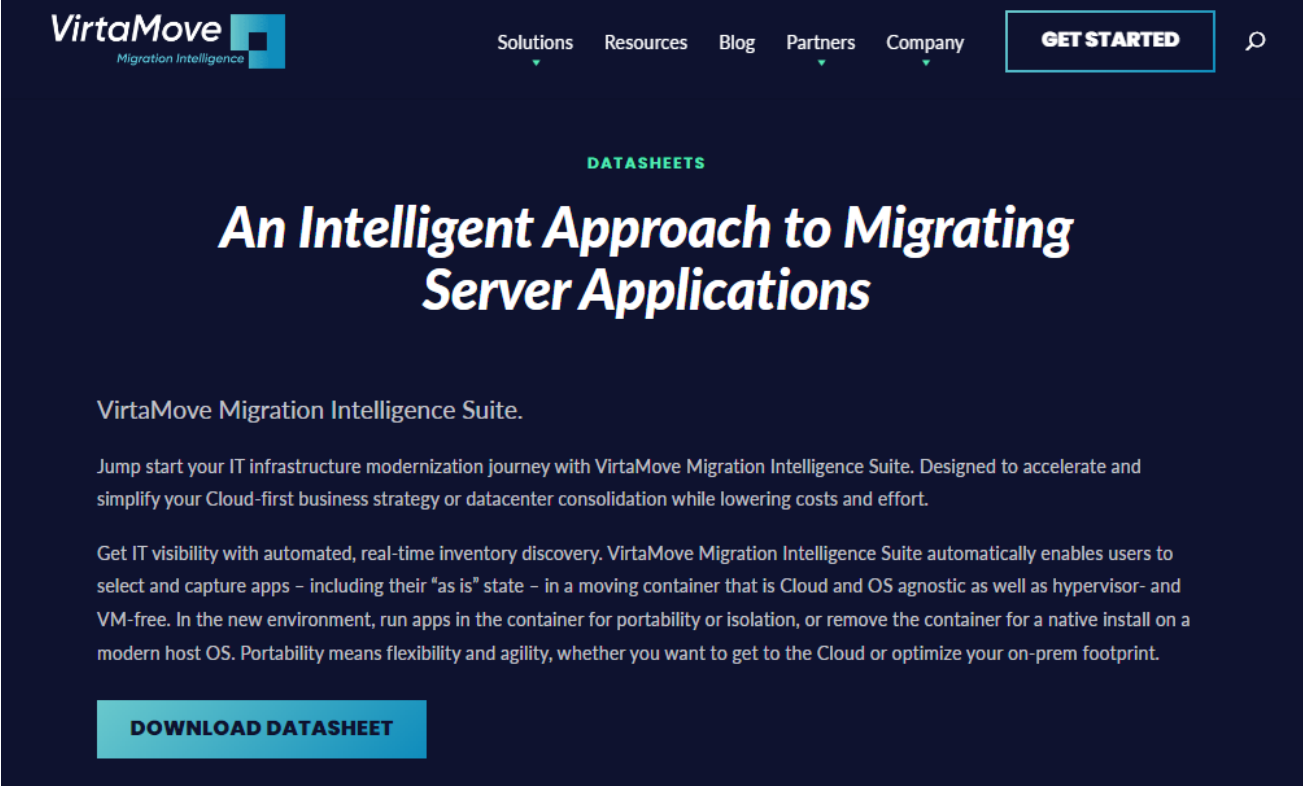
| Claim | US 8,943,500<br>Claim Term  | Analysis   |
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|       |   | <p><b>Managing Source Products</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</p> <ol style="list-style-type: none"> <li>1. Select a container, and then click the <b>Tether</b> tab.</li> <li>2. Optional. Click the <b>Use Tether</b> check box to enable Tether.</li> <li>3. To test the connection to the source machine, click the <b>Test Connection</b> button. If credentials fail or pre-requisites have not been met for tethering, an error message is displayed. You can view the Audit Report in the installation directory to determine what the problem is.</li> <li>4. Run an Audit of the source and destination machine by clicking the <b>Run Audit</b> button. If credentials fail or pre-requisites have not been met for tethering, an error message is displayed at the bottom of the Administrative Console window. To scroll through messages, click the Back or Forward button on the left or right of the message bar. You can view the Audit Report by going to the <b>Appliance Logs</b> tab to determine what the problem is.</li> <li>5. Click the <b>Find Applications</b> button. VirtaMove retrieves all remote applications, services, and user/group account information and displays this information in the <b>Source Products</b> tab.</li> <li>6. In the <b>Source Products</b> tab, review the list of source applications.</li> <li>7. Select the product or products you want to migrate or de-select a product or products as appropriate. To select an IIS application, select <b>Web Server (IIS)</b>. Before you attempt to migrate an IIS application, complete pre-requisites for IIS application migration. For information about pre-requisites and how to migrate an IIS application, see the Application Migration Guide. When you click away from the list in the <b>Source Products</b> tab, VirtaMove Tether automatically selects all user/group accounts, services, and executables associated with the installed application and displays these in the <b>Source Services and Source Accounts</b> tabs.</li> </ol>  <ol style="list-style-type: none"> <li>8. Click the <b>Pre-Populate</b> button to migrate source products, services, users, and groups. If you have not yet activated your VirtaMove license key, you will now be prompted to do so. See <a href="#">Activating Your VirtaMove License</a> for information. Note that the <b>Pre-Populate</b> portion process may take some time. A window displays the status of the Pre-Populate process. You can cancel the process by closing the window at the top right of the window. Click the <b>Close</b> button to close the window when the process is complete.</li> <li>9. To start the selected application, click <b>Dock</b> button and then click the <b>Launch Application</b> button once the container is successfully docked.</li> <li>10. Click <b>Save</b>.</li> </ol> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427775/Managing+Source+Products">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427775/Managing+Source+Products</a>)</p> |
| 10    | The system according to claim 1, wherein two or more applications are | The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein two or more applications are installed into a shared isolated environment.”   |



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|       | installed into a shared isolated environment. | <p>For example, the Accused Products “isolate applications.” Specifically, the Accused Products “create a virtual container” and “[p]re-populate the virtual container with <i>applications, services, accounts, components, and files</i> selected from the source machine.”</p>  <p><b>1. ISOLATE APPLICATIONS</b></p> <p>In many industries, like Insurance, Healthcare or Pharmaceuticals and even in Banking, customers must verify compliance of business applications to rigorous, auditable standards (for example <b>HIPAA</b> is a compliance standard in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy applications and run them in isolation on newer OS and server environments. Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by containerization avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application.</p> <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> |

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|       |                            | <p data-bbox="625 215 1182 256"><b>The Application Migration Process</b></p> <p data-bbox="625 293 993 337">  Owned by Thomas Farley (Deactivated) ***<br/> Last updated: Mar 25, 2022 • 2 min read </p> <p data-bbox="625 375 1125 399">Migrating an application involves the following steps:</p> <ol data-bbox="636 423 1934 841" style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link .</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a> .</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a> . You may wish to keep the application running in the migration container, as required.</li> </ol> <p data-bbox="611 922 1980 992"> <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a><br/> ) </p> |

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|       |                            | <h2 data-bbox="657 224 1346 277">Step 2: Prepopulate a Container</h2> <div data-bbox="657 326 1142 386"> Owned by Thomas Farley (Deactivated) ...<br/>Mar 29, 2022 • 1 min read</div> <p data-bbox="657 435 1713 667">Once the pre-migration Audit is complete, you can <u>create a migration container and populate it with the application and its dependencies</u>. V-Maestro will copy all dependencies into the container, such as user and group accounts and COM objects. Once this step is complete, V-Maestro will dock the container, which registers the container onto the operating system of the destination.</p> <p data-bbox="611 716 1948 753"><a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container</a></p> <p data-bbox="611 786 1902 823">Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> |

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|       |                            |  <p>(<a href="https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/">https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/</a>)</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |


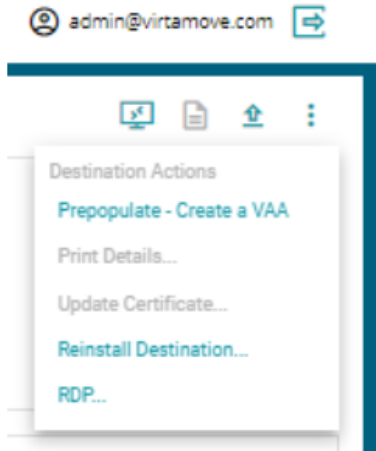
| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <p><b><i>Protect your applications by modernizing</i></b></p> <p>All the monitoring in the world doesn't eliminate the work involved in upgrading application stacks to new operating systems and software versions to improve security and reduce exposure to cyber warfare.</p> <p>Several options are available when it comes to upgrading:</p> <p><b>1. REDEVELOP AN APP</b></p> <ul style="list-style-type: none"><li>❑ You can incur the cost of redeveloping an application on a new OS. However, custom remediation costs can be substantial (more than six figures) and take months of effort and disruption.</li></ul> <p><b>2. CHOOSE AN ISV UPGRADE PATH</b></p> <ul style="list-style-type: none"><li>❑ If an ISV is involved, you might choose their upgrade path, along with the licensing and migration costs and delays for that single component of the software stack.</li></ul> <p><b>3. UPGRADE A SOFTWARE STACK BY HAND</b></p> <ul style="list-style-type: none"><li>❑ You might choose to upgrade a software stack by hand. This involves knowing what you still need, installing new versions of all the software components on the new server infrastructure, developing a data and application migration plan for each component, and developing a test plan to verify the migration. You will then need to remediate and rework any failed components. These steps can take weeks of planning, execution, and verification.</li></ul> <p><b>4. USE AN AUTOMATED MIGRATION TOOL</b></p> <ul style="list-style-type: none"><li>❑ This option involves using an automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required). Intelligent automation then places the software stack in the right place on the new OS.</li></ul> <p>Automated migration can take just a few hours and not uncommonly saves many weeks of labour.</p> <p>(<a href="https://virtamove.com/blog/cyber-warfare-again/">https://virtamove.com/blog/cyber-warfare-again/</a>)</p> |


| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><i>The VirtaMove solution: Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</i></p> <p><i>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</i></p> <p><a href="https://virtamove.com/blog/q-and-a/">(https://virtamove.com/blog/q-and-a/)</a></p> <p><i>“Your server may have external server dependencies that need to be taken into consideration. These are indicated by port connections and data flow of this dotted line. The dotted line tells us the servers are connected in some way. In this instance, it tells us they have a relationship and we should dig down to find out if these are the same applications or perhaps a back-end database service. This is valuable information in terms of deciding when migrating one of these application layers, there may be a knock-on effect on additional servers and infrastructure layers. It lets you plan how to address multi-tier applications. You may need to move one, two or all three of the apps and servers at same time ... The dotted line might simply indicate desktop users or [there] may be other computers or servers that have database components associated with this application in some fashion.”</i></p> |

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|       |                            |  <p>The video player displays a presentation slide. In the top right corner, there is a logo consisting of a teal square with a white 'V' and a teal triangle. The word 'Interdependencies' is centered on the slide in a large, teal, serif font. Below the slide, the video player controls are visible, showing a progress bar at 6:05 / 13:14 and various control icons (play, pause, volume, closed captions, settings, full screen).</p> <p>(<a href="https://www.youtube.com/watch?v=nOIMUwHMvY0&amp;t=274s">https://www.youtube.com/watch?v=nOIMUwHMvY0&amp;t=274s</a>)</p> |

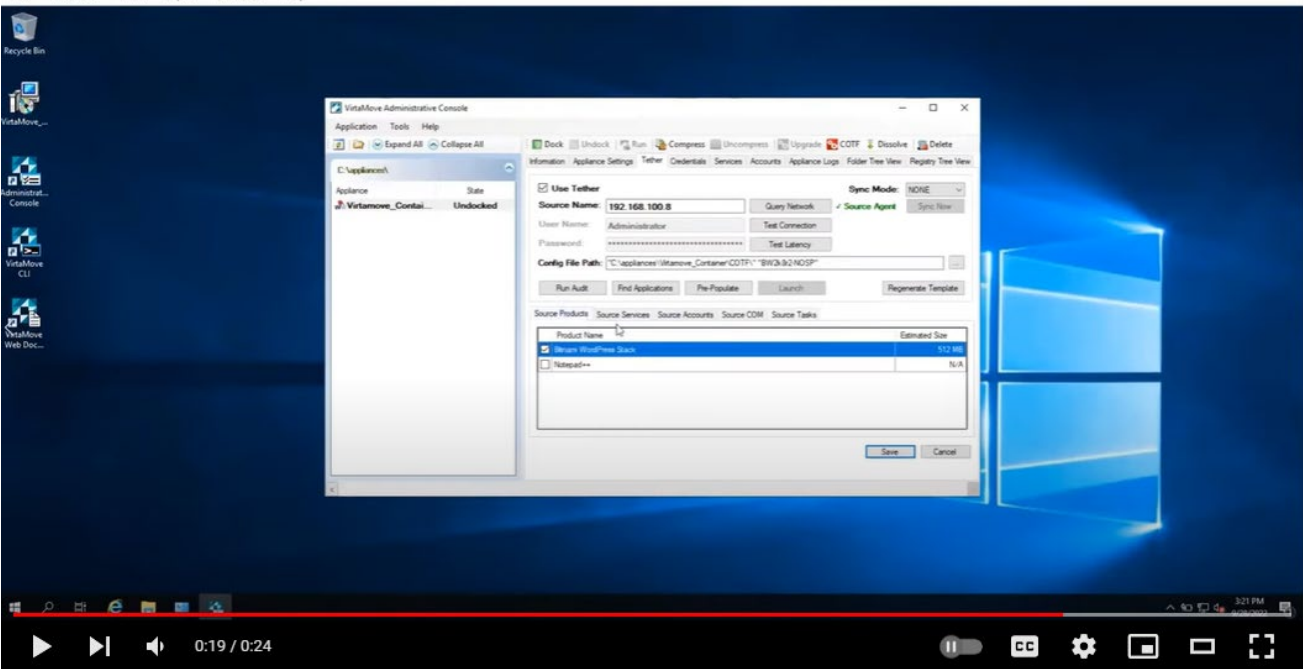


| Claim | US 8,943,500<br>Claim Term   | Analysis   |
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| 11    | The system according to claim 10, wherein the two or more applications share resources inside the shared isolated environment. | <p>The Accused Products comprise a system as claimed in claim 10. <i>See</i> claim 10. The Accused Products comprise a system, “wherein the two or more applications share resources inside the shared isolated environment.”</p> <p>For example, the Accused Products “create a virtual container” and “[p]re-populate the virtual container with <i>applications, services, accounts, components, and files</i> selected from the source machine.”</p> <h3>The Application Migration Process</h3> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 25, 2022 • 2 min read</p> <p>Migrating an application involves the following steps:</p> <ol style="list-style-type: none"> <li>1. Meet requirements for your environment as well as source and destination machines. See <a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310706978</a> Can't find link.</li> <li>2. Double-click the <b>Administrative Console</b> shortcut icon on your desktop to start Administrative Console.</li> <li>3. Create a virtual container and connect it to the source machine.</li> <li>4. Pre-populate the virtual container with applications, services, accounts, components, and files selected from the source machine.</li> <li>5. Run your virtualized application on the destination machine and exercise the application. See <a href="#">Running and Exercising Your Application</a>.</li> <li>6. Run VirtaMove Dissolve if you want to remove the migration container from the application and transfer the application to the underlying operating system on the destination machine so that the application will behave as if natively installed. Note that this process cannot be reversed. See <a href="#">Dissolving a Virtual Container</a>. You may wish to keep the application running in the migration container, as required.</li> </ol> <h3>Pre-Populate</h3> <p>Pre-populating a container is part of the VirtaMove application migration process. Pre-population migrates remote products, services, users, and groups without requiring downtime of the application on the source server. Any locked files will not be copied over until the application is fully exercised.</p> <p>Pre-populate captures components of the application while the application is up and running on the source server. You can then schedule a maintenance window at a later time for the application. It is during this maintenance window that you would stop and shut down the application before you complete the migration by exercising the application.</p> <p>Pre-populate occurs when you click the <b>Pre-Populate</b> button in the VirtaMove Administrative Console under the <b>Tether</b> tab. A window displays the status of the Pre-Populate process.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/310739347/The+Application+Migration+Process</a>)</p> |


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|       |                            | <p><b>Step 2: Prepopulate a Container</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Once the pre-migration Audit is complete, you can create a migration container and populate it with the application and its dependencies. V-Maestro will copy all dependencies into the container, such as user and group accounts and COM objects. Once this step is complete, V-Maestro will dock the container, which registers the container onto the operating system of the destination.</p> <p><b>To Create and Prepopulate a Container</b></p> <p>1. In the Destination Details window, click the Actions icon at the top and select <b>Prepopulate - Create a VAA</b>.</p>  <p>2. Click <b>Continue</b> to confirm. You can check <b>Current Operation</b> in the <b>Migrations in-Progress</b> card to see the status of the prepopulation process.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container</a>)</p> |

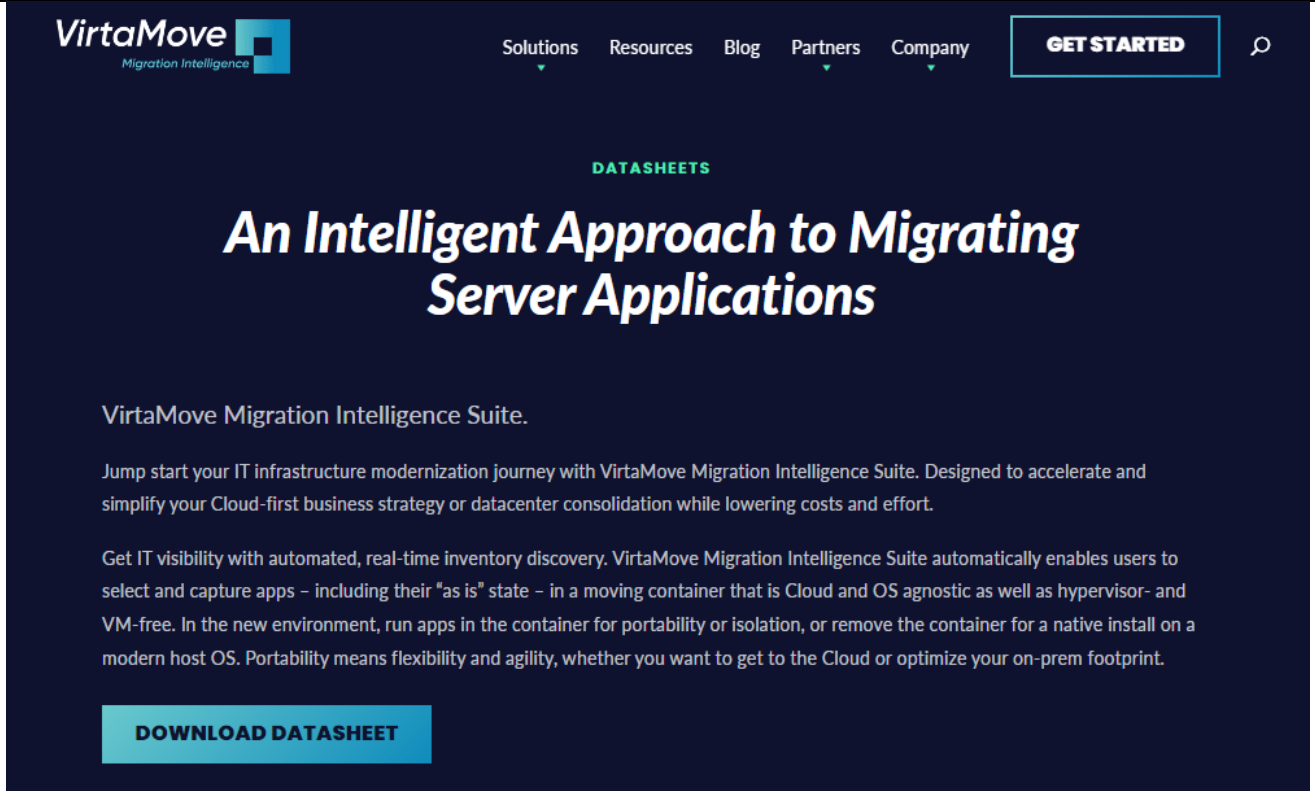
| Claim | US 8,943,500<br>Claim Term | Analysis  |
|-------|----------------------------|---|
|       |                            | <p>About Monitoring Applications</p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Monitoring discovered sources and the applications they are running lets you collect data about how and when these applications are used, in real time. It also discovers application components and dependencies that you might not be aware of, and how application components might be distributed across a network. Monitoring reduces the amount of time required to exercise the application on the destination, which therefore minimizes the duration of the maintenance window.</p> <p>After monitoring selected applications for a few days, you can decide how best to move them to selected destinations, or whether to even move them at all if they don't appear to be a priority for migration based on usage data. For example, applications with a monitoring status of No Usage may not be usefully moved.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications</a>)</p> |

| Claim   | US 8,943,500<br>Claim Term | Analysis   |              |                |   |          |  |          |   |     |   |     |  |     |
|---|----------------------------|--|--------------|----------------|---|----------|--|----------|---|-----|---|-----|--|-----|
|   |                            | <div>Managing Source Products</div> <div><div><div>TF</div><div>Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 2 min read</div></div><div><div><div>1. Select a container, and then click the <b>Tether</b> tab.</div><div>2. Optional. Click the <b>Use Tether</b> check box to enable Tether.</div><div>3. To test the connection to the source machine, click the <b>Test Connection</b> button. If credentials fail or pre-requisites have not been met for tethering, an error message is displayed. You can view the Audit Report in the installation directory to determine what the problem is.</div><div>4. Run an Audit of the source and destination machine by clicking the <b>Run Audit</b> button. If credentials fail or pre-requisites have not been met for tethering, an error message is displayed at the bottom of the Administrative Console window. To scroll through messages, click the Back or Forward button on the left or right of the message bar. You can view the Audit Report by going to the <b>Appliance Logs</b> tab to determine what the problem is.</div><div>5. Click the <b>Find Applications</b> button. VirtaMove retrieves all remote applications, services, and user/group account information and displays this information in the <b>Source Products</b> tab.</div><div>6. In the <b>Source Products</b> tab, review the list of source applications.</div><div>7. Select the product or products you want to migrate or de-select a product or products as appropriate. To select an IIS application, select <b>Web Server (IIS)</b>. Before you attempt to migrate an IIS application, complete pre-requisites for IIS application migration. For information about pre-requisites and how to migrate an IIS application, see the Application Migration Guide. When you click away from the list in the <b>Source Products</b> tab, VirtaMove Tether automatically selects all user/group accounts, services, and executables associated with the installed application and displays these in the <b>Source Services and Source Accounts</b> tabs.</div></div><div><div>Source ProductsSource ServicesSource AccountsSource COMSource Tasks</div><div><table><tr><th>Product Name</th><th>Estimated Size</th></tr><tr><td><input type="checkbox"/> Microsoft Data Access 2.6 SDK Lite</td><td>10.12 MB</td></tr><tr><td><input checked="" type="checkbox"/> Microsoft Office XP Professional</td><td>113.3 MB</td></tr><tr><td><input checked="" type="checkbox"/> Microsoft SQL Server 2000 Analytic Services</td><td>N/A</td></tr><tr><td><input type="checkbox"/> Microsoft SQL Server 2000 Pivot Table Services</td><td>N/A</td></tr><tr><td><input checked="" type="checkbox"/> Microsoft SQL Server 2008 R2</td><td>N/A</td></tr></table></div><div>SaveCancel</div></div><div><div><div>8. Click the <b>Pre-Populate</b> button to migrate source products, services, users, and groups. If you have not yet activated your VirtaMove license key, you will now be prompted to do so. See <a href="#">Activating Your VirtaMove License</a> for information. Note that the <b>Pre-Populate</b> portion process may take some time. A window displays the status of the Pre-Populate process. You can cancel the process by closing the window at the top right of the window. Click the <b>Close</b> button to close the window when the process is complete.</div><div>9. To start the selected application, click <b>Dock</b> button and then click the <b>Launch Application</b> button once the container is successfully docked.</div><div>10. Click <b>Save</b>.</div></div><div><div>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427775/Managing+Source+Products">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311427775/Managing+Source+Products</a>)</div><div>“We can go through the list of applications and select the ones we want to bring over.”</div></div></div></div></div> | Product Name | Estimated Size | <input type="checkbox"/> Microsoft Data Access 2.6 SDK Lite | 10.12 MB | <input checked="" type="checkbox"/> Microsoft Office XP Professional | 113.3 MB | <input checked="" type="checkbox"/> Microsoft SQL Server 2000 Analytic Services | N/A | <input type="checkbox"/> Microsoft SQL Server 2000 Pivot Table Services | N/A | <input checked="" type="checkbox"/> Microsoft SQL Server 2008 R2 | N/A |
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| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            |  <p>The screenshot shows the VirtualMove Administrative Console interface. A configuration window is open, displaying fields for 'Source Name' (192.168.100.8), 'User Name' (Administrator), and 'Password'. The 'Config File Path' is set to 'C:\appliances\Virtualmove_Container\CDTF\BWA-B2-NDSP'. Below these fields, there are tabs for 'Source Products', 'Source Services', 'Source Accounts', 'Source COM', and 'Source Tasks'. The 'Source Products' tab is active, showing a table with columns 'Product Name' and 'Estimated Size'. The table contains one entry: 'Stream Windows Task' with an estimated size of '102 MB'. The background of the console shows a Windows desktop with icons for Recycle Bin, VirtualMove, and various application folders.</p> <p>(<a href="https://www.youtube.com/watch?v=FvS88KEERwA">https://www.youtube.com/watch?v=FvS88KEERwA</a>)</p> <p><i>“Your server may have external server dependencies that need to be taken into consideration. These are indicated by port connections and data flow of this dotted line. The dotted line tells us the servers are connected in some way. In this instance, it tells us they have a relationship and we should dig down to find out if these are the same applications or perhaps a back-end database service. This is valuable information in terms of deciding when migrating one of these application layers, there may be a knock-on effect on additional servers and infrastructure layers. It lets you plan how to address multi-tier applications. You may need to move one, two or all three of the apps and servers at same time ... The dotted line might simply indicate desktop users or [there] may be other computers or servers that have database components associated with this application in some fashion.”</i></p> |

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|       |                            |  <p>The video player displays a presentation slide. In the top right corner, there is a logo consisting of a teal square with a white 'V' and a teal triangle. The word 'Interdependencies' is centered on the slide in a large, teal, sans-serif font. Below the slide, the video player controls are visible, showing a progress bar at 6:05 / 13:14 and various control icons.</p> <p>(<a href="https://www.youtube.com/watch?v=nOIMUwHMvY0&amp;t=274s">https://www.youtube.com/watch?v=nOIMUwHMvY0&amp;t=274s</a>)</p> |


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|       |                            | <p data-bbox="632 215 1346 253"><b>Migrating Folders, Shared Folders, and Registries</b></p> <div data-bbox="632 285 963 326">  Owned by Thomas Farley (Deactivated) ***<br/>Mar 04, 2022 • 3 min read         </div> <p data-bbox="632 358 1898 415">Using the Tree View feature, you can select folders and registries that you want to add to the tethering process and copy them over to the destination machine during the migration progress. You can also select which shared folders you want to set up on the destination machine.</p> <p data-bbox="632 440 1209 464">For information about shared folders, see <a href="#">About Shared Folders</a>.</p> <p data-bbox="611 513 1982 578"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394835/Migrating+Folders+Shared+Folders+and+Registries">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394835/Migrating+Folders+Shared+Folders+and+Registries</a>)</u></p> <p data-bbox="617 626 1898 675">10. Select the directories, shared folders, and registry keys you want to tether and then click <b>Save</b> on each respective tab. Note that these files are added to the container and cannot be unselected or removed from the container after you click <b>Save</b>.</p> <p data-bbox="646 724 1871 773">If you click the <b>Scan Files</b> or <b>Scan Registry</b> button again, the feature will search the source machine and migrated registry hives again. Any detected changes will be applied to the tree views.</p> <p data-bbox="646 821 1871 870">If you want to add more nodes to the migration process, you can select and save nodes that are displayed in black font. Node trees persist, so if you switch containers or close the Administrative Console and return to the Tree View tabs later, the data will still be available.</p> <p data-bbox="617 886 1898 935">11. Click the <b>Tether</b> tab and then click <b>Pre-Populate</b>. The saved directories, shared folders, and registry keys, as well any selected products, services, users, etc., are migrated to the destination machine.</p> <p data-bbox="611 984 1982 1049"><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394835/Migrating+Folders+Shared+Folders+and+Registries">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311394835/Migrating+Folders+Shared+Folders+and+Registries</a>)</u></p> <p data-bbox="611 1097 1898 1122">Additional evidence showing VirtaMove’s infringement is found in at least the following documents:</p> |


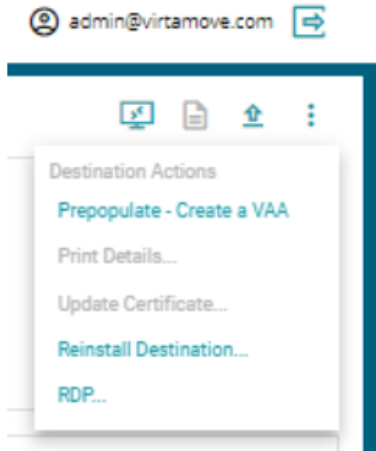
| Claim | US 8,943,500<br>Claim Term | Analysis   |
|-------|----------------------------|--|
|       |                            | <div><p>The screenshot displays the VirtaMove website with a dark blue background. At the top, the VirtaMove logo is on the left, and navigation links for Solutions, Resources, Blog, Partners, and Company are on the right. A 'GET STARTED' button is also visible. Below the navigation, the word 'DATASHEETS' is centered in green. The main heading reads 'An Intelligent Approach to Migrating Server Applications' in large white text. Below this, a paragraph describes the VirtaMove Migration Intelligence Suite. Further down, another paragraph details the suite's capabilities in IT visibility and application migration. At the bottom of the section, a blue button labeled 'DOWNLOAD DATASHEET' is present.</p></div> <p>(<a href="https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/">https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/</a>)</p> |


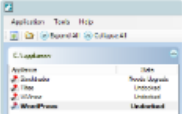

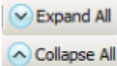



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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |                            | <p><b><i>Protect your applications by modernizing</i></b></p> <p>All the monitoring in the world doesn't eliminate the work involved in upgrading application stacks to new operating systems and software versions to improve security and reduce exposure to cyber warfare.</p> <p>Several options are available when it comes to upgrading:</p> <p><b>1. REDEVELOP AN APP</b></p> <ul style="list-style-type: none"><li>❑ You can incur the cost of redeveloping an application on a new OS. However, custom remediation costs can be substantial (more than six figures) and take months of effort and disruption.</li></ul> <p><b>2. CHOOSE AN ISV UPGRADE PATH</b></p> <ul style="list-style-type: none"><li>❑ If an ISV is involved, you might choose their upgrade path, along with the licensing and migration costs and delays for that single component of the software stack.</li></ul> <p><b>3. UPGRADE A SOFTWARE STACK BY HAND</b></p> <ul style="list-style-type: none"><li>❑ You might choose to upgrade a software stack by hand. This involves knowing what you still need, installing new versions of all the software components on the new server infrastructure, developing a data and application migration plan for each component, and developing a test plan to verify the migration. You will then need to remediate and rework any failed components. These steps can take weeks of planning, execution, and verification.</li></ul> <p><b>4. USE AN AUTOMATED MIGRATION TOOL</b></p> <ul style="list-style-type: none"><li>❑ This option involves using an automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required). Intelligent automation then places the software stack in the right place on the new OS.</li></ul> <p>Automated migration can take just a few hours and not uncommonly saves many weeks of labour.</p> <p>(<a href="https://virtamove.com/blog/cyber-warfare-again/">https://virtamove.com/blog/cyber-warfare-again/</a>)</p> |


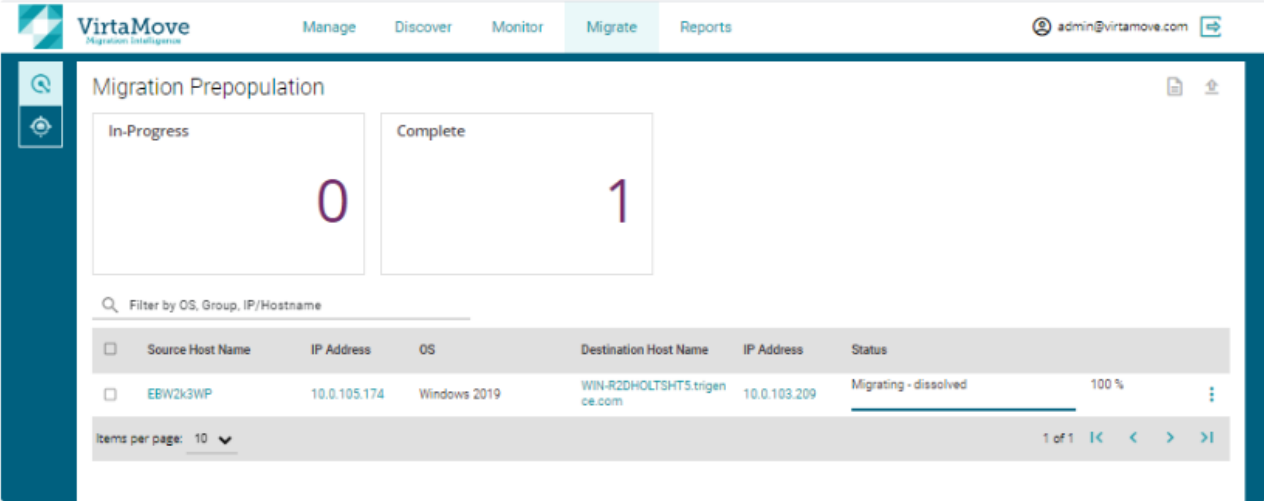
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| 12    | The system according to claim 1, wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments. | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein two or more applications are installed into separate isolated environments and the one or more applications run concurrently in the separate isolated environments.”</p> <p>For example, through the Accused Products, multiple containers, each housing specific applications, may be created as part of migration. These containers are able to run concurrently on the destination machine/server.</p> <p><b>Running Multiple Containers</b></p> <p>The  <code>virtarun</code> command uses shared memory, which allows VirtaMove to reduce the amount of memory needed when running multiple containers. For example, if you run 10 containers, this does not mean that 10 times the amount of memory is being used.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers</a>)</p> |

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|       |                            | <p><b>Step 2: Prepopulate a Container</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Once the pre-migration Audit is complete, you can create a migration container and populate it with the application and its dependencies. V-Maestro will copy all dependencies into the container, such as user and group accounts and COM objects. Once this step is complete, V-Maestro will dock the container, which registers the container onto the operating system of the destination.</p> <p><b>To Create and Prepopulate a Container</b></p> <p>1. In the Destination Details window, click the Actions icon at the top and select <b>Prepopulate - Create a VAA</b>.</p>  <p>2. Click <b>Continue</b> to confirm. You can check <b>Current Operation</b> in the <b>Migrations in-Progress</b> card to see the status of the prepopulation process.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802710/Step+2+Prepopulate+a+Container</a>)</p> |

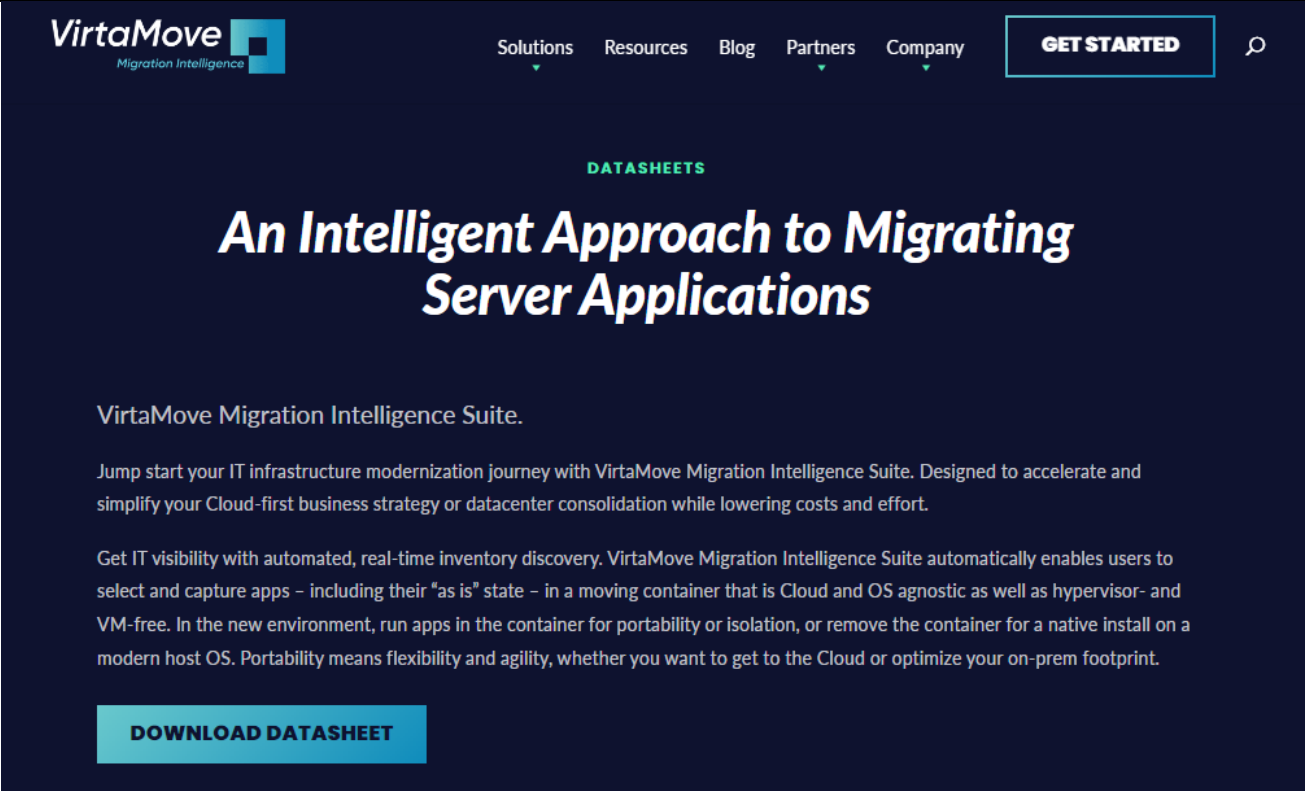
| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><b>Viewing Containers</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Sept 02, 2022 • 3 min read</p> <p>You can view a list of containers and creation information for a container. View the list of containers displayed in the left side of the Administrative Console window.</p>  <p>You can use the following commands to manage the list:</p> <ul style="list-style-type: none"> <li>Refresh the list</li> </ul>  <ul style="list-style-type: none"> <li>Expand or collapse the container locations in the list.</li> </ul>  <p>You can view information about the environment in which a container was created, such as the operating system and the VirtaMove software version. You can also view information about docked hosts.</p> <p>You can add or remove container locations in the view list, and change the default folder for containers.</p> <p><b>Note:</b><br/>Containers are not deleted from the source machine when you remove a container location from the list. For information about deleting containers, see <a href="#">Deleting Containers</a>.</p> <p><u>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311231096/Viewing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/311231096/Viewing+Containers</a>)</u></p> <p>The Accused Products discover and monitor multiple sources and applications. Each application and their components and dependencies may be pre-populated into their own distinct containers.</p> |

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|       |                            | <p>About Monitoring Applications</p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>Monitoring discovered sources and the applications they are running lets you collect data about how and when these applications are used, in real time. It also discovers application components and dependencies that you might not be aware of, and how application components might be distributed across a network. Monitoring reduces the amount of time required to exercise the application on the destination, which therefore minimizes the duration of the maintenance window.</p> <p>After monitoring selected applications for a few days, you can decide how best to move them to selected destinations, or whether to even move them at all if they don't appear to be a priority for migration based on usage data. For example, applications with a monitoring status of No Usage may not be usefully moved.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314802606/About+Monitoring+Applications</a>)</p> |

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|       |                            | <p><b>Viewing Overall Migration Information</b></p> <p> Owned by Thomas Farley (Deactivated) ***<br/>Mar 29, 2022 • 1 min read</p> <p>If you are performing concurrent migrations from several sources, you can view overall migration information. This is a good way to get a quick snapshot view of migrations, without the details about the latest operations in the Destination Details window.</p>  <p><b>To View Overall Migration Information</b></p> <p>Click <b>Migrate</b>. The Migration Prepopulation window is displayed.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671722/Viewing+Overall+Migration+Information">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314671722/Viewing+Overall+Migration+Information</a>)</p> <p>Additional evidence showing VirtaMove’s infringement is found in at least the following documents:</p> |



| Claim | US 8,943,500<br>Claim Term | Analysis   |
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|       |                            | <div></div> <p>(<a href="https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/">https://virtamove.com/resources/an-intelligent-approach-to-migrating-server-applications/</a>)</p> |

| Claim | US 8,943,500<br>Claim Term | Analysis  |
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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |                            | <div data-bbox="611 207 1906 1234"><h2><i><b>Protect your applications by modernizing</b></i></h2><p>All the monitoring in the world doesn't eliminate the work involved in upgrading application stacks to new operating systems and software versions to improve security and reduce exposure to cyber warfare.</p><p>Several options are available when it comes to upgrading:</p><ol style="list-style-type: none"><li><b>1. REDEVELOP AN APP</b><ul style="list-style-type: none"><li>❑ You can incur the cost of redeveloping an application on a new OS. However, custom remediation costs can be substantial (more than six figures) and take months of effort and disruption.</li></ul></li><li><b>2. CHOOSE AN ISV UPGRADE PATH</b><ul style="list-style-type: none"><li>❑ If an ISV is involved, you might choose their upgrade path, along with the licensing and migration costs and delays for that single component of the software stack.</li></ul></li><li><b>3. UPGRADE A SOFTWARE STACK BY HAND</b><ul style="list-style-type: none"><li>❑ You might choose to upgrade a software stack by hand. This involves knowing what you still need, installing new versions of all the software components on the new server infrastructure, developing a data and application migration plan for each component, and developing a test plan to verify the migration. You will then need to remediate and rework any failed components. These steps can take weeks of planning, execution, and verification.</li></ul></li><li><b>4. USE AN AUTOMATED MIGRATION TOOL</b><ul style="list-style-type: none"><li>❑ This option involves using an automated migration tool to isolate all the application stack dependencies from the underlying OS. You then move the application to the new server and OS infrastructure (upgrading database components on the fly if required). Intelligent automation then places the software stack in the right place on the new OS.</li></ul></li></ol><p>Automated migration can take just a few hours and not uncommonly saves many weeks of labour.</p></div> <p data-bbox="611 1268 1253 1304"><a href="https://virtamove.com/blog/cyber-warfare-again/">(https://virtamove.com/blog/cyber-warfare-again/)</a></p> |

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|       |   | <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> <p><b>Running Multiple Containers</b></p> <p>The  <code>virtarun</code> command uses shared memory, which allows VirtaMove to reduce the amount of memory needed when running multiple containers. For example, if you run 10 containers, this does not mean that 10 times the amount of memory is being used.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/313688121/Running+Containers</a>)</p> |
| 13    | The system according to claim 1, wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently. | <p>The Accused Products comprise a system as claimed in claim 1. <i>See</i> claim 1. The Accused Products comprise a system, “wherein a first application of the one or more applications is installed twice into separate isolated environments, and the separate isolated environments run concurrently and independently.”</p> <p>For example, “backup copies of the containerized applications can be stored for recovery or distribution purposes.” Thus, once an application is containerized, that same application may be recovered and added into another separate container. The resulting containers can then run concurrently and independently.</p>  |

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|       |                            | <div data-bbox="611 207 1906 1167"><h2 data-bbox="793 224 1745 354">Using VirtaMove to Solve Datacenter Management Problems</h2><p data-bbox="1142 386 1392 406">by VALERIE YATES   May 01, 2018</p><p data-bbox="648 479 1827 540">For years, customers have been taking advantage of VirtaMove containers to solve a range of business challenges in the datacenter management sphere.</p><h3 data-bbox="648 565 963 586">1. ISOLATE APPLICATIONS</h3><p data-bbox="648 605 1862 740">In industries like Insurance, Healthcare, Pharma, and Banking, customers must verify compliance to rigorous, auditable standards. Once an app is certified, making changes requires a time consuming and expensive recertification process. To avoid recertification, customers containerize legacy apps and run them in isolation on new OS and servers. Containerization allows customers to run several close variations of apps, each dependent on unique but similar software stacks on the same server.</p><h3 data-bbox="648 768 1375 789">2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</h3><p data-bbox="648 808 1862 906">If apps are <b>containerized</b>, it's easy to create exact images on new OSs such as Windows Server WS2012, WS2016, or WS2019. This eliminates the need to worry about recreating an installation process. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and cloud servers.</p><h3 data-bbox="648 933 1425 954">3. STORE MASTER COPIES OF APPLICATIONS FOR DISTRIBUTION</h3><p data-bbox="648 974 1854 1070">Once apps are containerized using VirtaMove, backup copies of the containerized apps can be stored for recovery, packaging, or distribution purposes. The master copy of an app stored in a container can be used to create a fresh, decluttered installation of an app, free of malware or other exposures.</p><p data-bbox="648 1105 1253 1127"><b>Read the Blog: VirtaMove – It's Not Just Application Modernization</b></p></div> <p data-bbox="611 1203 1505 1235"><a href="https://virtamove.com/blog/solve-datacenter-management-problems/">(https://virtamove.com/blog/solve-datacenter-management-problems/)</a></p> |

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|       |                            | <p><b>3. CONTAINERIZE AND ISOLATE APPLICATIONS</b></p> <p><i>The problem:</i> In regulated businesses, customers need to modernize certified applications that are running on legacy operating systems so that they can enable these apps on a supported OS. In many industries, like Insurance, Healthcare, Pharmaceuticals, and Banking, customers must verify compliance of business applications to rigorous, auditable standards (HIPAA and HITECH, for example, are compliance standards in regulated Healthcare-related businesses). Once an application is certified, making changes requires a time consuming and expensive re-certification process.</p> <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p><b>4. CREATE IDENTICAL APPLICATION IMAGES FOR TEST, DEVELOPMENT, OR BACKUP</b></p> <p><i>The problem:</i> Software development is a demanding business. Under pressure to meet deadlines, software developers might forget about the detailed installation scripts and configuration data required to create identical Cloud or Test copies of an application. Having identical Test and Development environments ensures that you've synchronized and are testing the current development version of software. Where identical development environments are not available, you're likely to see frequent problems with version and feature regression. Having a backup copy of both Development and Production instances is also critical for business continuity.</p> <p><i>The VirtaMove solution:</i> VirtaMove containerizes applications. Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacenter and Cloud servers, on newer OSs such as Windows Server 2008 R2 , WS2012, or WS2016. This eliminates the need to worry about recreating an installation process or scripts. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p>Using VirtaMove, applications containerized on WS2008 can run seamlessly on WS2012 or WS2016. Once applications are containerized, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, uncluttered installation of an application, free of malware or other exposures.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> |

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|       |                            | <p><b>2. CREATE EXACT APPLICATION IMAGES FOR DEVELOPMENT</b></p> <p>Software development is a demanding business. Under pressure to meet deadlines, software developers may well forget about the detailed installation scripts and configuration data required to create identical cloud or test copies of an application. However, if applications are containerized, it's easy to create exact images on newer OSs such as Windows Server 2008 R2 or WS2012 or WS2016. This eliminates the need to worry about recreating an installation process or scripts. Additionally, applications that are containerized with VirtaMove on WS2008 can run seamlessly on WS2012 or WS2016.</p> <p>Containerization accelerates the development and testing of new software by making it easy to create identical copies of the software on both datacentre and cloud servers. It lets the developer focus on building software that solves business problems rather than worrying about the details of configuration.</p> <p><b>3. STORE MASTER COPIES OF APPLICATIONS FOR RECOVERY PURPOSES</b></p> <p>Once applications are containerized using VirtaMove, backup copies of the containerized applications can be stored for recovery or distribution purposes. The master copy of an application stored in a container can be used to create a fresh, decluttered installation of an application, free of malware or other exposures.</p> <p><i>Isolate, replicate, and recover or distribute.</i> These are just three of the many benefits and uses of VirtaMove containers, which customers rely on every day. To learn more about other use cases or how VirtaMove can help accelerate and modernize your Windows Server infrastructure, please call or e-mail us.</p> <p>(<a href="https://virtamove.com/blog/not-just-app-modernization/">https://virtamove.com/blog/not-just-app-modernization/</a>)</p> |



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|       |                            | <p><i>The VirtaMove solution:</i> Avoid the pain of re-certification by using VirtaMove to containerize legacy applications and run them in isolation on modern OS and server environments.</p> <p>Containerization allows customers to run several close variations of applications, each dependent on unique but similar software stacks on the same server. The isolation provided by VirtaMove containers avoids conflicts between different stacks (for example, database and driver variations) and eliminates the need to manage multiple servers and license multiple OS platforms for each application. In addition, security and performance are improved by virtue of running on a modern server platform.</p> <p>(<a href="https://virtamove.com/blog/q-and-a/">https://virtamove.com/blog/q-and-a/</a>)</p> <p>Additional evidence showing VirtaMove's infringement is found in at least the following documents:</p> <p><b>To Delete and Recreate a Container</b></p> <ol style="list-style-type: none"> <li>1. Undock the container using the <code>virtaundock</code> command.</li> <li>2. Do one of the following: <ol style="list-style-type: none"> <li>a. Create a backup copy of the container template. Delete the container and then make the necessary changes to the template and use the <code>vir</code> <code>tacreate</code> <code>/T</code> command to recreate the container.</li> <li>b. <a href="#">Delete</a> the container and start over.</li> </ol> </li> <li>3. Dock, start the container's services (if required), and run the container to confirm the changes have been made.</li> </ol> <p>You can repeat any of these actions as often as required until a container satisfies your requirements.</p> <p>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314114051/Testing+Containers</a>)</p> |

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|           |  | <div><div><div>virtacreate</div><div><div>TF</div><div>Owned by Thomas Farley (Deactivated) ***<br/>Last updated: Mar 28, 2022 • 1 min read</div></div></div><div><p>This command creates or updates a container. Administrator privileges are required.</p><p>You cannot create a container if <a href="#">shortnames</a> are disabled (if <code>NtfsDisable8dot3NameCreation</code> is set to 1 in the registry key <code>HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\File System</code>).</p></div><div><div>Syntax</div><div><div>1</div><div>VIRTACREATE Appliance /E</div></div><div><div>1</div><div>VIRTACREATE Appliance /C &lt;path_to_appliance_to_clone&gt;</div></div><div><div>1</div><div>VIRTACREATE Appliance /N &lt;path_to_template&gt;</div></div><div><div>1</div><div>VIRTACREATE Appliance /T &lt;path_to_template&gt; [&lt;server server username password&gt;]</div></div></div><div><div>Options</div><table><tr><th>Option</th><th>Description</th></tr><tr><td>Appliance</td><td>Full path of the container to create or update. The path cannot contain spaces.</td></tr><tr><td>/E</td><td>Create a container with no file set (contains only VirtaMove proprietary files and properties).</td></tr><tr><td>/C</td><td>Clone a container.</td></tr><tr><td>/N</td><td>Create a container from a container template.</td></tr><tr><td>/T</td><td>Create a container from a container template using tether. Credentials can be provided. If <a href="#">VirtaMove Source Agent</a> is installed on the source machine, you do not need to provide credentials for the source machine.</td></tr></table></div></div> <div>(<a href="https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate">https://virtamove.atlassian.net/wiki/spaces/VDOC/pages/314212506/virtacreate</a>)</div> | Option | Description | Appliance | Full path of the container to create or update. The path cannot contain spaces. | /E | Create a container with no file set (contains only VirtaMove proprietary files and properties). | /C | Clone a container. | /N | Create a container from a container template. | /T | Create a container from a container template using tether. Credentials can be provided. If <a href="#">VirtaMove Source Agent</a> is installed on the source machine, you do not need to provide credentials for the source machine. |
| Option    | Description  |   |        |             |           |   |    |   |    |                    |    |   |    |  |
| Appliance | Full path of the container to create or update. The path cannot contain spaces.  |   |        |             |           |   |    |   |    |                    |    |   |    |  |
| /E        | Create a container with no file set (contains only VirtaMove proprietary files and properties).  |   |        |             |           |   |    |   |    |                    |    |   |    |  |
| /C        | Clone a container.   |   |        |             |           |   |    |   |    |                    |    |   |    |  |
| /N        | Create a container from a container template.  |   |        |             |           |   |    |   |    |                    |    |   |    |  |
| /T        | Create a container from a container template using tether. Credentials can be provided. If <a href="#">VirtaMove Source Agent</a> is installed on the source machine, you do not need to provide credentials for the source machine. |   |        |             |           |   |    |   |    |                    |    |   |    |  |

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| 14pre | A method, comprising:   | To the extent that the preamble is limiting, the Accused Products comprise “[a] method” for updating isolated environments (containers) as applications request new resources. <i>See</i> limitation 1pre. |
| 14a   | creating one or more isolated environments during installation of the one or more applications; and                             | <i>See</i> limitation 1d.  |
| 14b   | updating the one or more isolated environments as the one or more applications use additional resources while running;          | <i>See</i> limitation 1e.  |
| 14c   | removing the one or more isolated environments as part of uninstalling the one or more applications; and                        | <i>See</i> limitation 1f.  |
| 14d   | storing the one or more isolated environments for retrieval at a later time after the one or more applications are uninstalled. | <i>See</i> limitation 1g.  |
| 15    | The method of claim 14 comprising intercepting access to system   | The Accused Products comprise a method as claimed in claim 14. <i>See</i> claim 14.  |

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|       | resources and interfaces at one or more interception layers.   | The Accused Products meet the remaining limitations in this claim. <i>See</i> claim 3.   |
| 16    | The method of claim 15 comprising maintaining mapping between the system resources inside the one or more isolated environments and outside.   | The Accused Products comprise a method as claimed in claim 15. <i>See</i> claim 15.<br><br>The Accused Products meet the remaining limitations in this claim. <i>See</i> claim 5.            |
| 17    | The method of claim 14 comprising isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments. | The Accused Products comprise a method as claimed in claim 14. <i>See</i> claim 14.<br><br>The Accused Products meet the remaining limitations in this claim. <i>See</i> claim 2.            |
|       |  |  |
| 18pre | A non-transitory computer readable storage medium comprising instructions for:   | The Accused Products comprise a “non-transitory computer readable medium” for updating isolated environments (containers) as applications request new resources. <i>See</i> limitation 1pre. |
| 18a   | creating one or more isolated environments during installation of one or more applications; and  | <i>See</i> limitation 1d.  |

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| 18b   | updating the one or more isolated environments as the one or more applications use additional resources while running;   | <i>See</i> limitation 1e.   |
| 18c   | removing the one or more isolated environments as part of uninstalling the one or more applications; and   | <i>See</i> limitation 1f.   |
| 18d   | storing the one or more isolated environments for retrieval at a later time after the one or more applications are uninstalled.  | <i>See</i> limitation 1g.   |
| 19    | The non-transitory computer readable storage medium of claim 18 comprising instructions for maintaining mapping between the system resources inside the one or more isolated environments and outside. | <p>The Accused Products comprise a non-transitory computer readable medium as claimed in claim 18. <i>See</i> claim 18.</p> <p>The Accused Products meet the remaining limitations in this claim. <i>See</i> claim 5.</p> |

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| 20    | The non-transitory computer readable storage medium of claim 19 comprising instructions for isolating the one or more applications from other applications and a host operating system while running within the one or more isolated environments. | <p>The Accused Products comprise a non-transitory computer readable medium as claimed in claim 19. <i>See</i> claim 19.</p> <p>The Accused Products meet the remaining limitations in this claim. <i>See</i> claim 2.</p> |